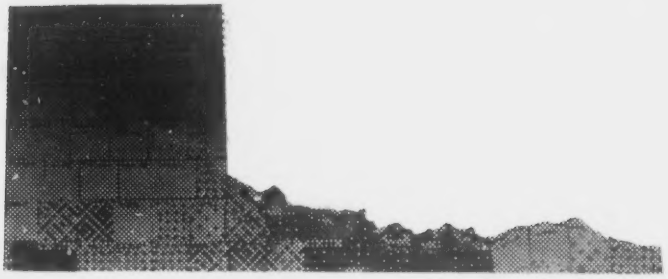
TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS



INDUSTRY STAFFING PATTERNS FOR SELECTED STATE AND LOCAL GOVERNMENT INDUSTRIES

TEXAS EMPLOYMENT COMMISSION
In cooperation with the U.S. Department of Labor
Bureau of Labor Statistics and the Employment
and Training Administration

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TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS

STAFFING PATTERNS
FOR SELECTED STATE AND LOCAL
GOVERNMENT INDUSTRIES

MAY 1979

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Texas Employment Commission
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Issued August 1980

PREFACE

This publication summarizes the results of an occupational employment survey of selected Trade and Regulated Industries in Texas.

This report is the product of a Federal-State Cooperative Program. The Bureau of Labor Statistics developed the procedures and provided technical assistance. The Employment and Training Administration funded the project and was responsible for the administrative aspects of the program. The Texas Employment Commission collected and analyzed the data, provided the necessary computer services, and published these findings.

Special thanks are extended to the many cooperating employers who provided the survey data which made this publication possible.

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INTRODUCTION

The Occupational Employment Statistics (OES) Program is a part of a Federal-State Cooperative Program involving State Employment Security Agencies in conjunction with the Employment and Training Administration and the Bureau of Labor Statistics.

The OES Program is designed to: (1) provide accurate profiles of occupational resources by industry and trends in the number of workers by occupation, (2) aid in projections of future manpower requirements by industry and occupation, and (3) identify emerging and disappearing occupations. This information will help in the development of educational training programs and will also provide valuable information for employment counselors and manpower planners. These data will be used to refine and modify the worker-demand projections generated through the Industry-Occupation Matrix System.

State and Local Government data were collected during the survey week of May 12, 1979.

This publication and others of its type to follow will be continually updated, as well as improved, to provide a better basis for decision-making at all levels of manpower and vocational planning.

METHODOLOGY

The Sample

In State Government, a sample per se was not used; but rather a total enumeration of employees which was furnished by the Position Classification Division of the State Auditors Office. For this survey, the benchmark (universe) employment was 59,539.

In Local Government, the sampling differs from State Government. A sampling frame, furnished by the Bureau of the Census, was used as a sample design. For this survey, the benchmark (universe) employment was 147,965.

Sampling Error

By definition, State Government does not have sampling errors because a total enumeration was used.

In Local Government, the sampling error is an arithmetic measure of the precision of the estimate. It is the error that results from the difference between data obtained if the same survey methods were applied to collecting identical information from the entire population (universe).

The relative errors express the absolute sampling error of an estimate as a percentage of that estimate. Because this measure of precision is on the same base for different estimates, comparison is possible. The relative errors are such that the chances are two out of three (68%) that the results of such a complete survey of all firms would not differ by plus or minus one relative standard error from the OES occupational estimates, and an interval of two relative standard errors will yield a 95% confidence level.

For example, the OES estimate of employment in Local Government for the number of Civil Engineers employed was 475 with a relative standard error of 5.60%. The chances are two out of three that the true number of workers employed in that occupation at the time of the survey was between 448 and 502 ($475 \pm .0560 \times 475$), and we may be 95% certain that the true number fell between 422 and 528 ($475 \pm 2 \times .0560 \times 475$). The relative standard error allows the user to judge, with a given degree of confidence, the quality of any particular occupational estimate. It is a measure of the relative dispersion within the data collected, and indicates the occupational coefficient of variation of the population from which the sample was drawn.

Nonsampling Error

By definition, State Government does not have nonsampling error because a total enumeration was used.

In Local Government, a survey of this design and complexity is going to have a small degree of nonsampling error. Examples of these errors are faulty questionnaire design, inaccuracy of data furnished, ineffective processing, and nonresponse. The possibility of errors in the design of and the data furnished by the questionnaires, as well as errors in processing, was recognized from the start of the survey. Every effort was exercised to avoid and control them.

The nonresponse area was handled to a large degree by the built-in variables of the sampling and estimating process. This process takes into consideration that the occupational distribution of the nonreporting sample unit in a given employment size class is the same as among the reporting establishments of that size class.

Estimating Procedure

In State Government, employment was classified in total on a master schedule. The employment from this schedule was then keypunched into the correct occupational groups as presented.

In Local Government, a ratio method (established statistical procedure) was used throughout the report. Any given size class of any given Local Government segment represents an estimating cell. All establishments in a given cell are assigned a sample weight which is the inverse of the sampling ratio. There is a direct relationship between employment and the number of units within a size class to determine the ratio, or the probability of sample selection.

The employment for any specific occupation in each establishment is inflated by its sample weight and summed for all sample establishments in the cell. A ratio is then derived of the weighted employment for each occupation to the weighted reported total employment. This ratio is then multiplied by the benchmark employment for that estimating cell as of May 12, 1979, the survey month, thus yielding the occupational make-up of the estimating cell for that date.

Like occupational employments are summed across all employment size classes within each three-digit SIC to arrive at a total industry employment for each occupation. Two-digit estimates of occupational employment were derived by summing estimates across three-digit SIC industries.

Collection Procedures

In State Government, data was furnished by the Position Classification Division of the State Auditors Office.

In Local Government, all of the data was collected by mail. Survey operations included an initial mail out and two follow-ups to nonrespondents. In some cases, an extra follow-up was made where nonresponse was a critical factor. The telephone was used to clarify information, handle critical areas, and prompt respondents to furnish survey data.

CONSIDERATIONS OF THE USES OF THE ESTIMATES

Relative Error

Relative error is a measure of precision and expresses the absolute sampling error of an estimate as a percentage of that estimate. From an accuracy standpoint, the higher the relative error - the less accurate the estimate. If relative errors exceeded fifty percent, the employment from these occupations was merged with the employment of the "all other" residual category that was relevant to them.

Throughout the tables, it should be noted that the relative error is computed only for specific occupations and not for residual categories nor for occupational groupings. These are noted by "na" (not applicable).

Rounding Errors and Occupations With Employment Less Than Thirty

All percentage estimates are carried out to two decimal places with the exception of the percent of establishments reporting the occupation. These percentages were rounded to the nearest whole number.

In this survey many more occupations were surveyed than are actually shown in the tables. Occupations which had employment of less than thirty were suppressed, and their employment was added to the residual category for their major occupational group. All employment estimates were rounded to the nearest five.

STATE GOVERNMENT

This report includes all State Government employees by occupation except those employed in hospitals and educational institutions such as elementary and secondary schools, vocational high schools, universities, colleges, junior colleges, and technical institutes. (Hospitals and Education will be covered in later reports). Also included in this report are libraries and other types of information centers; mental health centers, convalescent homes, and other health service agencies; and vocational schools (except vocational high schools) and other types of training facilities which are part of any other State Government function such as police training academies or administrative training centers.

Multiple job holders (performing work in two or more listed occupations) were classified only once in the occupation requiring the highest level of skill. Working supervisors (those spending 20% or more of their time at work similiar to that performed by workers under their supervision) were classified in the occupations that were most closely related to their work duties. Employees whose wages were reimbursed through CETA Titles II and VI (Public Service Employment Act) were classified in the occupation in which they were currently employed.

STATE GOVERNMENT

Occupation	Estimated Employment	Percent of Total Employment 1/
TOTAL EMPLOYMENT.....	59,515	100.00
MANAGERS, OFFICERS, ELECTED OFFICIALS, AND PUBLIC ADMINISTRATION INSPECTORS, TOTAL.....	7,320	12.30
Chief Executives, General Administrators and Legislators.....	185	.31
Public Administration Inspectors, Except Construction.....	1,435	2.41
All Other Managers and Officers.....	5,700	9.57
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	25,920	43.55
Accountants and Auditors.....	2,215	3.72
Agricultural Scientists.....	40	.06
Architects.....	80	.13
Biological Scientists.....	280	.46
Budget Analysts.....	50	.08
Caseworkers.....	6,035	10.13
Chemical Engineers.....	50	.08
Chemists.....	130	.21
Civil Engineering Technicians.....	75	.12
Civil Engineers.....	330	.55
Claims Takers, Unemployment Benefits.	135	.22
Community Organization Workers.....	70	.11
Computer Programmers.....	600	1.01
Dietitians and/or Nutritionists.....	60	.09
Drafters.....	170	.28
Economists.....	160	.26
Employment Interviewers.....	1,380	2.31
Foresters and Conservation Scientists	330	.55
Geologists and Geophysicists.....	180	.30
Group Recreation Workers.....	545	.91
Judges.....	435	.73
Landscape Architects.....	40	.06
Lawyers.....	455	.76

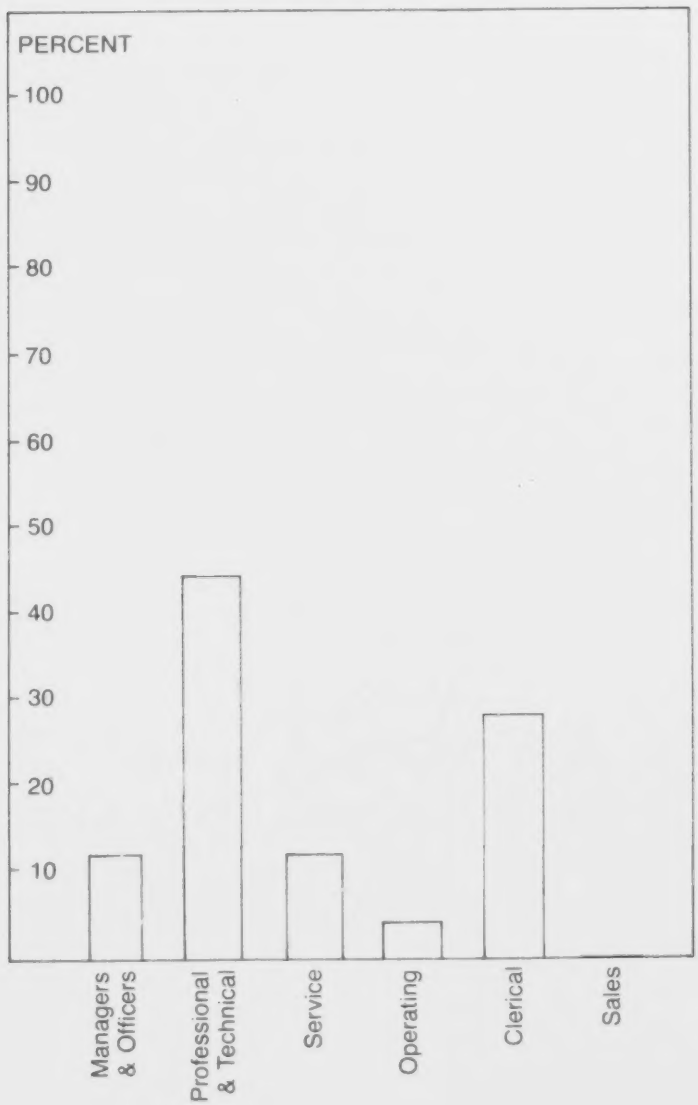
Occupation	Estimated Employment	Percent of Total Employment 1/
PROFESSIONAL AND TECHNICAL OCCUPATIONS (Continued)		
Librarians, Professional	40	.06
Licensed Practical Nurses	755	1.26
Mathematical Scientists	150	.25
Mechanical Engineers	60	.10
Medical and Dental Technicians and Technologists	150	.25
Nurses, Professional	910	1.53
Personnel and Labor Relations Specialists	740	1.24
Photographers	185	.30
Physical Therapists	30	.05
Physicians and/or Surgeons	160	.26
Physician's Assistants	85	.14
Psychologists	70	.12
Purchasing Agents and/or Buyers	220	.36
Science Technicians	55	.08
Surveyors	30	.05
Systems Analysts, Electronic Data Processing	335	.56
Tax Examiners, Collectors, and/or Revenue Agents	460	.77
Traffic Engineers	35	.05
Urban and Regional Planners	40	.06
Veterinarians	60	.10
Vocational and Educational Counselors	610	1.02
Welfare Investigators	215	.36
Writers and/or Editors	120	.20
All Other Engineering Technicians	2,825	4.74
All Other Engineers	85	.14
All Other Physical Scientists	65	.11
All Other Social Scientists	2/	
All Other Therapists	305	.51
All Other Professional Workers	740	1.24
All Other Technical Workers	2/	
SERVICE OCCUPATIONS, TOTAL	7,360	12.37
Police and Detective Supervisors	310	.52
Supervisors, Nonworking-Service	115	.19
Bailiffs	75	.12
Child-Care Workers	145	.24
Correction Officers and/or Jailers	2,195	3.69
Detectives, Police	55	.09
Fish and Game Wardens	375	.63

Occupation	*Estimated Employment	Percent of Total Employment 1/
SERVICE OCCUPATIONS (Continued)		
Forest Conservation Workers	185	.31
Guards and Doorkeepers	150	.25
Janitors, Porters, and Cleaners	655	1.10
Kitchen Helpers	35	.05
Nurse Aides and/or Orderlies	120	.20
Police Patrol Officers	2,080	3.49
Social Service Aides	770	1.29
All Other Food Service Workers	2/	
All Other Service Workers	2/	
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	2,060	3.47
Supervisors, Nonworking	875	1.46
Engineering-Equipment Mechanics	75	.12
Gardeners and Groundskeepers	85	.14
Helpers, Trades	40	.06
Maintenance Repairers, General Utility	115	.19
Mechanics, Automotive	60	.10
Mechanics, Maintenance	185	.31
Stationary Engineers	75	.12
Truck Drivers	60	.10
All Other Mechanics and Repairers	130	.22
All Other Skilled Craftsmen and Kindred Workers	35	.06
All Other Operatives and Semiskilled Workers	65	.11
All Other Laborers and Unskilled Workers	260	.43
CLERICAL OCCUPATIONS, TOTAL	16,855	28.30
Clerical Supervisors, Office or Plant	1,010	1.69
Accounting Clerks	815	1.36
Computer Operators	285	.47
Court Clerks	75	.12
Dispatchers-Police, Fire and Ambulance	220	.37
Duplicating Machine Operators	240	.40
Eligibility Workers, Welfare	260	.43
General Clerks, Office	4,175	7.01
Keypunch Operators	785	1.31
Library Assistants	30	.05

Occupation	Estimated Employment	Percent of Total Employment 1/
CLERICAL OCCUPATIONS (Continued)		
License Clerks	75	.12
Mail Clerks	80	.13
Messengers	70	.11
Personnel Clerks	180	.30
Procurement Clerks	70	.11
Production Clerks and/or Coordinators	50	.08
Receptionists	80	.13
Secretaries	2,680	4.50
Statistical Clerks	360	.60
Stenographers	1,105	1.85
Stock Clerks-Stockroom, Warehouse or Storage Yard	200	.33
Switchboard Operator-Receptionists	45	.07
Switchboard Operators	70	.11
Typists	3,365	5.65
All Other Office Machine Operators	55	.09
All Other Office Clerical Workers	475	.79

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

STATE GOVERNMENT



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

LOCAL GOVERNMENT

This report includes all Local Government units except hospitals and educational institutions such as elementary and secondary schools, vocational high schools, universities, colleges, junior colleges, and technical institutes. Also included are libraries and other types of information centers; mental health centers, convalescent homes, and other health service agencies; and vocational schools (except vocational high schools) and other types of training facilities which are part of any other Local Government function such as police training academies or administrative training centers.

Multiple job holders (performing work in two or more listed occupations) were classified only once in the occupation requiring the highest level of skill. Working supervisors (those spending 20% or more of their time at work similiar to that performed by workers under their supervision) were classified in the occupations that most closely related to their work duties. Employees whose wages were reimbursed through CETA Titles II and VI (Public Service Employment Act) were classified in the occupation in which they were currently employed.

LOCAL GOVERNMENT

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	147,985	100.00	na	na
MANAGERS, OFFICERS, ELECTED OFFICIALS, AND PUBLIC ADMINISTRATION INSPECTORS, TOTAL...	9,300	6.28	na	na
Chief Executives, General Administrators, and Legislators.....	2,640	1.78	15.77	92
Construction Inspectors.....	1,100	.74	14.15	62
Public Administration Inspectors, Except Construction.....	630	.42	6.82	44
All Other Managers and Officers..	4,930	3.33	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	19,715	13.32	na	na
Accountants and Auditors.....	905	.61	7.37	70
Agricultural Scientists.....	135	.09	33.13	21
Assessors.....	1,180	.79	15.56	70
Budget Analysts.....	105	.07	15.68	25
Caseworkers.....	2,255	1.52	13.58	40
Chemists.....	85	.05	7.00	12
Civil Engineering Technicians....	205	.13	12.51	28
Civil Engineers.....	475	.32	5.60	54
Community Organization Workers...	420	.28	13.34	28
Computer Programmers.....	245	.16	9.53	47
Dietitians and/or Nutritionists..	90	.05	42.83	15
Drafters.....	505	.33	5.71	55
Electrical and Electronic Engineers.....	105	.07	19.37	15
Electrical and Electronic Technicians.....	240	.16	18.42	20
Group Recreation Workers.....	1,555	1.05	10.00	46
Judges.....	1,395	.94	13.93	82
Law Clerks.....	215	.14	44.86	24
Lawyers.....	1,360	.91	9.39	78

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
PROFESSIONAL AND TECHNICAL OCCUPATIONS (Continued)				
Librarians, Professional	880	.59	7.49	59
Licensed Practical Nurses	305	.20	43.56	22
Magistrates	830	.56	24.20	30
Medical and Dental Technicians	275	.18	8.72	19
Nurses, Professional	550	.37	12.20	36
Paralegal Personnel	155	.10	12.52	21
Personnel and Labor Relations Specialists	420	.28	7.93	48
Photographers	75	.05	17.30	25
Physicians and/or Surgeons	205	.13	20.85	38
Physician's Assistants	80	.05	22.22	6
Public Relations Practitioners	120	.08	18.39	24
Purchasing Agents and/or Buyers	195	.13	11.47	60
Radio Operators	95	.06	8.72	11
Science Technicians	100	.06	11.43	18
Surveyors	280	.18	8.35	45
Systems Analysts, Electronic Data Processing	235	.15	8.78	36
Tax Examiners, Collectors, and/or Revenue Agents	1,160	.78	29.20	65
Technical Assistants, Library	535	.36	19.30	40
Traffic Technicians	105	.07	5.14	26
Urban and Regional Planners	295	.19	5.92	39
All Other Engineering Technicians	250	.16	na	na
All Other Engineers	2/			
All Other Life Scientists	80	.05	na	na
All Other Physical Scientists	2/			
All Other Social Scientists	2/			
All Other Therapists	35	.02	na	na
All Other Professional Workers	430	.29	na	na
All Other Technical Workers	315	.21	na	na
SERVICE OCCUPATIONS, TOTAL	43,940	29.70	na	na
Fire Fighting and Prevention Supervisors	2,015	1.36	7.47	49
Police and Detective Supervisors	2,950	1.99	5.90	71
Supervisors, Nonworking-Service	690	.46	17.10	35
Bailiffs	455	.30	10.42	31
Child Care Workers	295	.20	17.16	10
Cooks, Institution	365	.24	49.47	28

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
SERVICE OCCUPATIONS (Continued)				
Correction Officers and/or Jailers	1,755	1.18	10.80	45
Detectives, Police	1,715	1.15	6.05	55
Fire Fighters	8,830	5.96	7.68	57
Fire Inspectors	355	.24	15.05	51
Guards and Doorkeepers	695	.46	17.94	29
Janitors, Porters, and Cleaners	3,500	2.36	9.76	86
Parking Enforcement Officers	290	.19	21.32	33
Police Patrol Officers	13,525	9.14	3.91	81
Recreation Facility Attendants	655	.44	10.58	32
School Crossing Guards	1,300	.87	12.90	30
Sheriffs	1,675	1.13	26.08	31
Social Service Aides	460	.31	19.70	21
Ushers, Lobby Attendants, Ticket Takers, and/or Drive-In Theater Attendants	130	.08	22.10	3
All Other Food Service Workers	210	.14	na	na
All Other Service Workers	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	45,320	30.63	na	na
Supervisors, Nonworking	1,765	1.19	9.62	58
Ambulance Drivers and/or Attendants	760	.51	36.88	18
Animal Caretakers	875	.59	11.64	46
Bus Drivers	485	.32	11.74	16
Carpenters	370	.25	17.19	39
Cement Masons	75	.05	8.07	15
Diesel Mechanics	95	.06	11.24	20
Electricians	460	.31	12.11	38
Engineering Equipment Mechanics	170	.11	16.44	15
Gardeners and Groundskeepers	2,340	1.58	11.64	67
Heavy Equipment Operators	2,810	1.89	14.82	74
Helpers, Trade	1,640	1.10	12.02	35
Highway Maintenance Men	5,640	3.81	15.95	66
Hydroelectric Machinery Mechanics, Powerhouse Repairers, and/or Gas Plant Repairers	130	.08	15.18	6
Industrial Truck Operators	650	.44	16.92	20
Instrument Repairers	90	.06	15.31	16
Line Installer-Repairers	465	.31	37.94	9

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS (Continued)				
Maintenance Repairers, General Utility	2,475	1.67	21.19	60
Mechanics, Automotive	1,520	1.02	6.87	71
Mechanics, Maintenance	640	.43	10.23	26
Painters, Maintenance	230	.15	14.18	26
Plumbers and/or Pipefitters	295	.19	34.03	24
Pump Station Operators, Waterworks	195	.13	21.52	21
Refuse Collectors	3,595	2.43	12.35	51
Service Station Attendants, Fuel Pump Attendants, and/or Lubricators	395	.26	7.11	37
Sewage Plant Operators	1,335	.90	11.42	45
Stationary Engineers	125	.08	11.39	10
Streetlight Repairers and Servicers	250	.16	35.30	25
Substation Operators	165	.11	25.47	7
Surveyor Helpers	325	.21	9.02	39
Treatment Plant Mechanics	200	.13	12.07	24
Truck Drivers	3,590	2.42	7.20	59
Water Meter Installers	415	.28	26.84	28
Water Treatment Plant Operators	1,160	.78	19.61	42
Welders and/or Flamecutters	185	.12	13.83	42
All Other Mechanics and Repairers	525	.35	na	na
All Other Skilled Craftsmen and Kindred Workers	1,080	.73	na	na
All Other Operatives and Semi-Skilled Workers	1,245	.84	na	na
All Other Laborers and Unskilled Workers	6,555	4.43	na	na
CLERICAL OCCUPATIONS, TOTAL	29,485	19.92	na	na
Clerical Supervisors, Office or Plant	700	.47	9.06	49
Accounting Clerks	1,340	.90	9.98	72
Bookkeepers, Hand	350	.23	14.65	32
Bookkeeping and/or Billing Machine Operators	215	.14	31.79	23
Cashiers	880	.59	13.33	58
Computer Operators	365	.24	10.82	59
Court Clerks	1,605	1.08	18.82	70

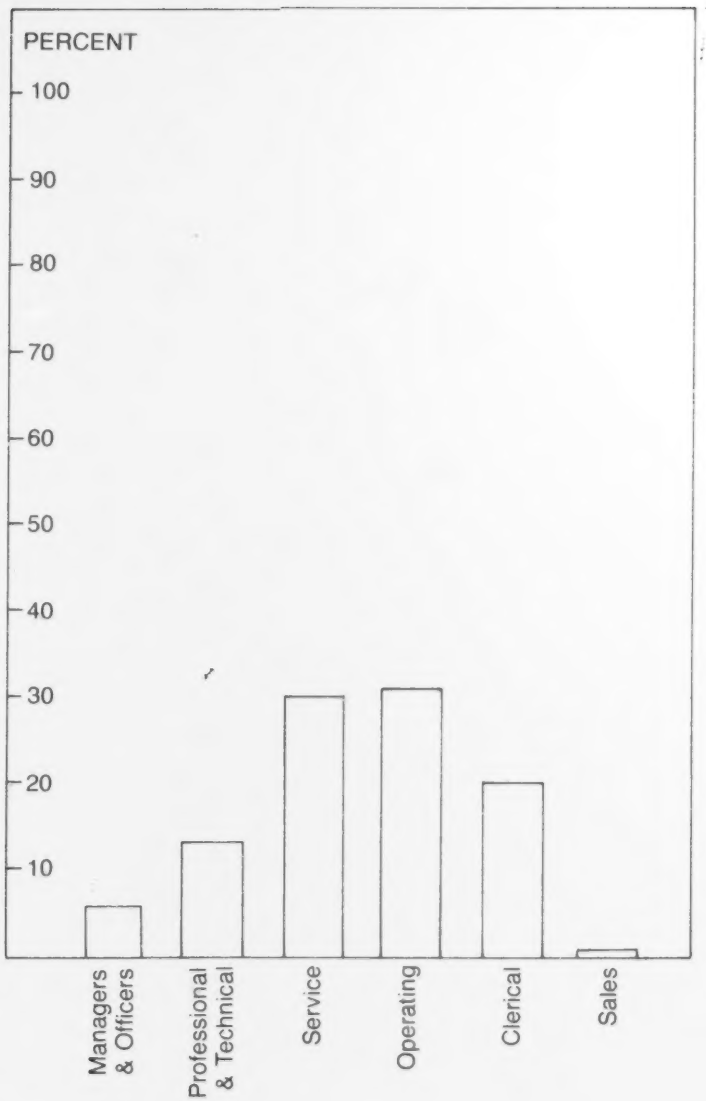
Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS (Continued)				
Dispatchers-Police, Fire and Ambulance	2,300	1.55	13.37	80
Dispatchers-Vehicle, Service or Work	165	.11	36.23	23
File Clerks	950	.64	7.98	27
General Clerks, Office	5,070	3.42	14.11	60
Keypunch Operators	460	.30	8.60	56
Library Assistants	1,260	.85	11.05	43
License Clerks	155	.10	13.39	16
Messengers	95	.06	15.11	19
Meter Readers, Utilities	950	.64	12.53	47
Payroll and/or Timekeeping Clerks	295	.20	16.02	57
Personnel Clerks	155	.10	5.40	44
Receptionists	130	.08	6.96	23
Secretaries	3,295	2.22	7.80	87
Statistical Clerks	230	.15	19.08	25
Stenographers	875	.59	11.92	42
Stock Clerks-Stockroom, Warehouse or Storage Yard	375	.25	6.88	55
Switchboard Operator-Receptionists	245	.16	12.80	28
Switchboard Operators	325	.21	10.39	36
Town Clerks	675	.45	23.18	44
Typists	4,895	3.30	16.04	68
Weighers, Recordkeeping	100	.06	36.64	9
All Other Office Machine Operators	235	.16	na	na
All Other Office Clerical Workers	2/			
All Other Plant Clerical Workers	85	.06	na	na
SALES OCCUPATIONS, TOTAL	225	.15	na	na
Sales Clerks	200	.13	29.71	3
All Other Sales Agents, Associates, and/or Representatives	2/			

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

Occupation	Percent
Chief Executives, General Administrators and Legislators	92
Secretaries	87
Janitors, Porters, and Cleaners	86
Judges	82
Police Patrol Officers	81

LOCAL GOVERNMENT



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

GLOSSARY OF TERMS

Benchmark Employment: A term which is used to identify specific employment figure(s) which existed at a particular point in time. In the OES survey program, the term benchmark is used in two ways: (1) It is the establishment or industry employment that existed at the time the sample was designed. (2) When estimates are made, it is used again to refer to the total universe employment for each estimating cell as of the reference date of the survey.

Establishment: An economic unit which produces goods or services; for example, a consulting service, a factory, or a store. In most instances, each establishment is a single physical location and is engaged in one predominate type of economic activity for which an industry code is applicable. Establishments are also referred to as reporting units.

Estimating Cell: One size class in one industry.

Sample Weight: A numerical value that is assigned to an establishment during the sample selection. For example, if an establishment has an occupational employment of 25 and a weight of three, then for estimating purposes, the 25 employment will have a representation of 75 (3 x 25).

Sampling Error: The difference between data obtained from a sample and data which would have been obtained if the same survey methods were applied to collecting identical information for the entire population.

Sampling Units: The establishments selected randomly from the universe.

Size Class: The stratification of an industry by employment. For example, establishments with employment of 10-19 would be in one size class, and those with employment of 20-49 would be in another size class, etc.

Universe: Total amount of establishments or units covered under the Texas Employment Security Law.

Usable Response: All receipts which, after initial classification and schedule review, are judged to contain usable OES data.

Special Districts: All local entities authorized by State Law with sufficient administrative and fiscal autonomy to qualify as independent governmental units. These are known by a variety of titles including districts, authorities, boards, commissions, etc., as specified in the enabling State Legislation, and which are authorized to provide only one, or a limited number of designated functions or services.

County: The largest territorial division for Local Government within a state of the United States.

Municipalities: A primarily urban political unit having corporate status and usually powers of self-government.

BIBLIOGRAPHY

Dallas Morning News, Texas Almanac, Dallas: A. H. Belo Corporation, 1980-1981 Edition.

United States Department of Labor, Occupational Outlook Handbook, 1980-1981 Edition, Washington, D.C. 20402, U. S. Government Printing Office.

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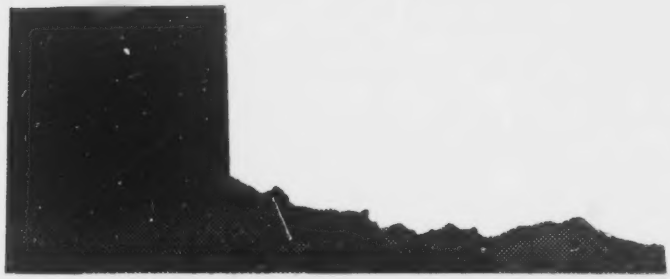
TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS



INDUSTRY STAFFING PATTERNS FOR SELECTED TRADE AND REGULATED INDUSTRIES

TEXAS EMPLOYMENT COMMISSION
In cooperation with the U.S. Department of Labor
Bureau of Labor Statistics and the Employment
and Training Administration

TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS

INDUSTRY STAFFING PATTERNS FOR SELECTED TRADE AND REGULATED INDUSTRIES

2nd QUARTER 1979

Prepared by
Texas Employment Commission
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Issued August 1980

PREFACE

This publication summarizes the results of an occupational employment survey of selected Trade and Regulated Industries in Texas.

This report is the product of a Federal-State Cooperative Program. The Bureau of Labor Statistics developed the procedures and provided technical assistance. The Employment and Training Administration funded the project and was responsible for the administrative aspects of the program. The Texas Employment Commission collected and analyzed the data, provided the necessary computer services, and published these findings.

Special thanks are extended to the many cooperating employers who provided the survey data which made this publication possible.

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INTRODUCTION

The Occupational Employment Statistics (OES) Program is a part of a Federal-State Cooperative Program involving State Employment Security Agencies in conjunction with the Employment Training Administration and the Bureau of Labor Statistics. The Program furnishes current estimates of industry staffing patterns by occupation through periodic surveys of the nonfarm wage and salary sector of the economy. Texas has been involved in this Program since 1974 and is one of 46 participating states.

The OES Program is designed to: (1) provide accurate profiles of occupational resources by industry and trends in the number of workers employed by occupation, (2) aid in projections of future manpower requirements by industry and occupation, and (3) identify emerging and disappearing occupations. This information helps in the development of educational and training programs and provides valuable information for employment counselors and manpower planners. Data is generated to show the occupational profile of selected industry groups so that individual firms will be able to compare their occupational staffing patterns to that of the industry of which they are a part. These data will be used to refine and modify the worker-demand projections generated through the Industry-Occupation Matrix System.

This report represents Trade and Regulated Industry data collected during the survey period. All respondents were requested to include employment data for the appropriate survey month--April 12, May 12, or June 12 of 1979.

This publication, and others of its type to follow, will be continually updated, as well as improved, to provide a better basis for decision-making at all levels of human resource planning and development.

METHODOLOGY

The Sample

The Second Quarter 1978 Report of Employment, Wages and Contributions Covered by the Texas Unemployment Compensation Act was used as a sampling frame for the Occupational Employment Statistics Survey of Trade and Regulated Industry Establishments.

The sampling frame was stratified by three-digit (in some cases two-digit) SIC (Standard Industrial Classification) codes and by nine employment size groups and was then collapsed to seven classes of employment: 1-9, 10-19, 20-49, 50-99, 100-249, 250-499, and 500 plus. Establishments with over 250 employment were automatically included in a separate size class and were picked with certainty. All other establishments were subject to sample selection on a random basis, with the units in larger size classes having a proportionately higher chance of selection. Each unit was given a weight according to the proportion of firms selected in each size class. The sample included 7,673 establishments with a represented benchmark employment of 1,689,557.

Sampling Error

The sampling error is an arithmetic measure of the precision of the estimate. It can be considered as the difference between the estimate computed from the sample and the results that would have been obtained if the same methods were used to collect identical information from the universe (all available establishments). The relative errors listed in this report are the absolute sampling errors of each occupation expressed as a percent of that occupational estimate. This measure of precision is on the same base, a percentage comparison. The relative errors shown in this report are such that the chances are two out of three (68 percent) that the results of such a complete survey of all firms would not differ by plus or minus one relative standard error from the OES occupational estimates, and an interval of two relative standard errors will yield a 95 percent confidence level. For example, the OES estimate of employment in Communication (SIC 48, excludes 483) for the number of Accountants and Auditors employed was 220 with a relative standard error of 10.73 percent. The chances are two out of three that the true number of workers employed in that occupation at the time of the survey was between 196 and 244 ($220 \pm .1073 \times 220$), and we may be 95 percent certain that the true number fell between 173 and 267 ($220 \pm 2 \times .1073 \times 220$). The relative standard error allows the user to judge, with a given degree of confidence, the quality of any particular occupational estimate. It is a measure

of the relative dispersion within the data collected, and indicates the occupational coefficient of variation of the population from which the sample was drawn.

Nonsampling Error

A survey of this magnitude is going to have a small degree of nonsampling error. Examples of these errors are faulty questionnaire design, inaccuracy of data furnished, ineffective processing, and nonresponse. The possibility of errors in the design of and the data furnished by the questionnaires, as well as errors in processing, was recognized from the start of the survey. Every effort was exercised to avoid and control them. The nonresponse area was handled to a large degree by the built-in variables of the sampling and estimating process. This process takes into consideration that the occupational distribution of the nonreporting sample unit in a given three-digit employment size class is the same as among the reporting establishments of that size class.

Estimating Procedure

A ratio method, an established statistical procedure, was used throughout the report. Any given size class of any given industry represents an estimating cell. All establishments in a given cell are assigned a sample weight which is the inverse of the sampling ratio. There is a direct relationship between employment and the number of units within a size class to determine the ratio, or the probability of sample selection. The employment for any specific occupation in each establishment is inflated by its sample weight and summed for all sample establishments in the cell. A ratio is then derived of the weighted employment for each occupation to the weighted reported total employment. This ratio is then multiplied by the benchmark employment for that estimating cell as of the appropriate survey month--April 12, May 12, or June 12 of 1979, thus yielding the occupational make-up of the estimating cell for that date. Like occupational employments are summed across all employment size classes within each three-digit SIC to arrive at a total industry employment for each occupation. Two-digit estimates of occupational employment were derived by summing estimates across three-digit SIC industries.

Collection Procedures

The majority of the data was collected by mail. Survey operations included an initial mail out and two follow-ups to nonrespondents (in some cases three, where nonresponse was a critical factor). The telephone was used extensively to clarify information, handle critical nonresponse areas, and prompt small and medium-size respondents to furnish survey data.

CONSIDERATIONS OF THE USES OF THE ESTIMATES

Relative Error

Relative error is a measure of precision and expresses the absolute sampling error of an estimate as a percentage of that estimate. From an accuracy standpoint, the higher the relative error - the less accurate the estimate. If relative errors exceeded fifty percent, the employment from these occupations was merged with the employment of the "all other" residual category that was relevant to them.

Throughout the tables, it should be noted that the relative error is computed only for specific occupations and not for residual categories nor for occupational groupings. These are noted by "na" (not applicable).

Rounding Errors and Occupations With Employment Less Than Thirty

All percentage estimates were carried out to two decimal places with the exception of the percent of establishments reporting the occupation. These percentages were rounded to the nearest whole number.

In each SIC (Standard Industrial Classification), many more occupations were surveyed than are actually shown in the tables. Occupations which had employment of less than thirty were suppressed, and their employment was added to the residual category for their major occupational group.

Industrial Classification With Benchmark Employment of Less Than One Thousand

Some of the industry groups surveyed had an insignificant amount of benchmark employment--less than one thousand. In order for the user to have meaningful occupational staffing patterns, the industry was suppressed or collapsed to the major two-digit industry group totals.

STAFFING PATTERNS FOR SELECTED REGULATED INDUSTRIES

INDUSTRY CHARACTERISTICS

Firms included in this report are engaged in transportation, warehousing, or communication activities. Several of these industries or segments thereof are publicly regulated as to the prices they may charge and services they may render. For all industries, the establishments have activities, workers, and physical facilities distributed over an extensive geographic area.

The major industrial groups surveyed were:

1. Local and Suburban Transit and Interurban Highway Passenger Transportation
2. Motor Freight Transportation and Warehousing
3. Water Transportation
4. Transportation by Air
5. Pipe Lines, Except Natural Gas
6. Transportation Services
7. Communication
8. Electric, Gas, and Sanitary Services

Due to sample response and confidentiality requirements, all groups are not covered in this report.

Table 1
SIC 411
Local and Suburban Passenger Transportation
Statewide

This group includes establishments primarily engaged in furnishing passenger transportation confined principally to a municipality, contiguous municipalities, or a municipality and its suburban areas, other than by taxicab, school bus, or charter service.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	2,140	100.00	na	na
MANAGERS AND OFFICERS.....	140	6.53	20.11	94
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	320	14.80	na	na
Emergency Medical Technicians..	300	13.93	41.12	38
All Other Professional and Technical Workers.....	2/			
SERVICE OCCUPATIONS.....	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	1,370	64.38	na	na
Bus Drivers.....	790	37.10	16.81	50
Cleaners, Vehicle.....	40	2.06	29.79	44
Diesel Mechanics.....	110	5.34	24.64	44
All Other Mechanics and Repairers.....	2/			
All Other Skilled Craftsmen and Kindred Workers.....	30	1.22	na	na
All Other Operatives and Semi-skilled Workers.....	2/			
All Other Laborers and Unskilled Workers.....	2/			

Table 1 (Continued) Local and Suburban Passenger Transportation, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS, TOTAL.....	300	13.82	na	na
Dispatchers-Police, Fire, and Ambulance.....	60	2.95	43.16	31
Dispatchers-Vehicle, Service, or Work.....	50	2.34	34.74	56
General Clerks, Office.....	90	3.98	16.15	75
All Other Office Clerical Workers.....	90	4.23	na	na
All Other Plant Clerical Workers.....	2/			
SALES OCCUPATIONS.....	2/			

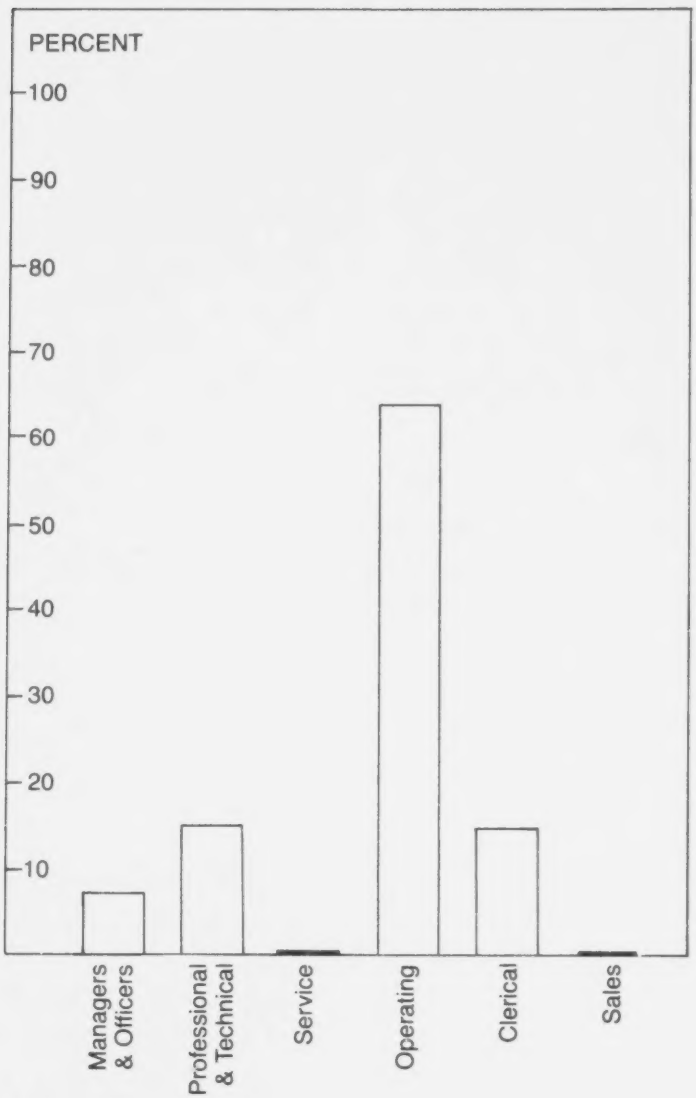
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers.....	94
General Clerks, Office.....	75
Dispatchers-Vehicle, Service, or Work.....	56
Bus Drivers.....	50
Cleaners, Vehicle.....	44
Diesel Mechanics.....	44

GRAPH 1
SIC 411

LOCAL AND SUBURBAN PASSENGER TRANSPORTATION



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 2
SIC 42
Motor Freight Transportation and Warehousing
Statewide

This major group includes establishments furnishing local or long-distance trucking or transfer services, or those engaged in the storage of farm products, furniture and other household goods, or commercial goods of any nature. The operation of terminal facilities for handling freight, with or without maintenance facilities, is also included.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	91,720	100.00	na	na
MANAGERS AND OFFICERS.....	6,800	7.41	10.74	90
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	820	.90	na	na
Accountants and Auditors.....	330	.36	32.07	21
Personnel and Labor Relations Specialists.....	140	.15	25.83	15
Purchasing Agents and/or Buyers	70	.07	24.00	11
All Other Professional and Technical Workers.....	[2/]			
SERVICE OCCUPATIONS, TOTAL.....	770	.83	na	na
Guards and Doorkeepers.....	260	.27	29.59	11
Janitors, Porters, and Cleaners.....	490	.53	28.38	29
All Other Service Workers.....	[2/]			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	67,290	73.39	na	na
Supervisors, Nonworking.....	1,860	2.03	17.01	44
Body Repairers, Automotive.....	70	.07	39.06	3
Cleaners, Vehicle.....	250	.27	23.15	11
Delivery and Route Workers.....	5,930	6.46	25.35	15
Diesel Mechanics.....	2,920	3.18	20.82	30
Industrial Truck Operators.....	2,090	2.27	16.82	34

Table 2 (Continued) Motor Freight Transportation and Warehousing, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Maintenance Repairers, General Utility	270	.29	45.29	14
Mechanics, Automotive	1,300	1.42	20.33	24
Order Fillers	200	.21	43.52	6
Service Station Attendants, Fuel Pump Attendants, and/or Lubricators	350	.38	24.51	12
Tire Changers	280	.30	18.31	15
Tractor-Trailer Truck Drivers	24,030	26.21	9.63	52
Truck Driver Helpers	3,750	4.09	22.97	18
Truck Drivers, Heavy	8,360	9.11	24.01	17
Truck Drivers, Light	5,450	5.94	22.55	21
Welders and/or Flamecutters	70	.07	37.51	4
All Other Mechanics and Repairers	220	.23	na	na
All Other Skilled Craftsmen and Kindred Workers	640	.69	na	na
All Other Operatives and Semi-skilled Workers	[2/]			
All Other Laborers and Unskilled Workers	8,470	9.23	na	na
CLERICAL OCCUPATIONS, TOTAL	14,780	16.10	na	na
Clerical Supervisors, Office or Plant	510	.56	29.82	22
Accounting Clerks	370	.40	19.49	15
Adjustment Clerks	450	.49	18.91	19
Bookkeepers, Hand	970	1.05	33.91	20
Bookkeeping and/or Billing Machine Operators	410	.45	23.87	15
Cashiers	320	.35	24.55	17
Computer Operators	80	.09	32.32	11
Dispatchers-Vehicle, Service, or Work	1,840	2.00	14.92	39
File Clerks	240	.26	24.52	16
General Clerks, Office	4,420	4.81	13.58	56
Keypunch Operators	180	.19	22.80	11
Manifest Clerks	80	.09	31.60	7
Payroll and/or Timekeeping Clerks	230	.24	21.61	22

Table 2 (Continued) Motor Freight Transportation and Warehousing, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS, (Continued)				
Personnel Clerks	50	.05	26.20	9
Rate Clerks, Freight	560	.60	14.24	22
Receptionists	70	.07	32.22	9
Secretaries	910	.99	26.11	38
Shipping and/or Receiving Clerks	360	.38	37.26	13
Shipping Packers	670	.72	40.25	8
Stock Clerks - Stockroom, Warehouse, or Storage Yard	760	.82	23.83	18
Switchboard Operator-Receptionists	70	.07	17.43	17
Typists	290	.31	23.49	14
All Other Office Machine Operators	90	.09	na	na
All Other Office Clerical Workers	510	.55	na	na
All Other Plant Clerical Workers	2/			
SALES OCCUPATIONS, TOTAL	1,260	1.37	na	na
Crating-and-Moving Estimators	380	.40	46.69	6
Traffic Agents	620	.67	20.72	21
All Other Sales Agents, Associates, and/or Representatives	250	.27	na	na
All Other Sales Workers	2/			

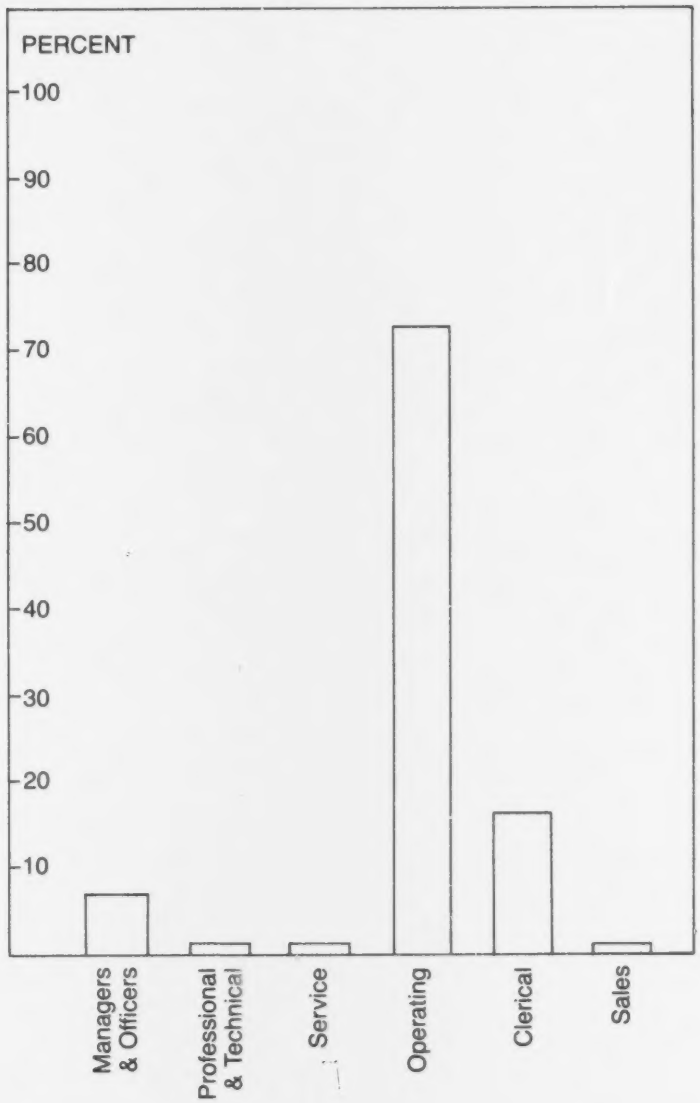
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers	90
General Clerks, Office	56
Tractor-Trailer Truck Drivers	52
Supervisors, Nonworking	44
Dispatchers-Vehicle, Service, or Work	39

GRAPH 2
SIC 42

MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 3
SIC 421
Trucking, Local and Long Distance
Statewide

This group includes establishments primarily engaged in furnishing local or long-distance trucking or transfer services.

Occupation	Estimated Empl.	% of Total Empl.[1]/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	83,800	100.00	na	na
MANAGERS AND OFFICERS.....	5,830	6.96	12.20	89
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	700	.84	na	na
Accountants and Auditors.....	270	.32	37.64	22
Personnel and Labor Relations Specialists.....	140	.16	26.89	20
Purchasing Agents and/or Buyers	50	.06	29.93	12
All Other Professional and Technical Workers.....	2/			
SERVICE OCCUPATIONS, TOTAL.....	580	.69	na	na
Guards and Doorkeepers.....	200	.23	33.48	9
Janitors, Porters, and Cleaners.....	370	.43	35.10	25
All Other Service Workers.....	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	62,670	74.79	na	na
Supervisors, Nonworking.....	1,580	1.88	19.87	43
Body Repairers, Automotive.....	70	.07	40.21	4
Cleaners, Vehicle.....	250	.29	23.15	17
Delivery and Route Workers.....	5,910	7.05	25.43	22
Diesel Mechanics.....	2,910	3.47	20.87	47
Industrial Truck Operators.....	1,040	1.24	31.10	20
Mechanics, Automotive.....	1,220	1.46	21.59	26
Service Station Attendants, Fuel Pump Attendants, and/or Lubricators.....	350	.42	24.51	19

Table 3 (Continued) Trucking, Local and Long Distance, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Tire Changers	280	.33	18.31	24
Tractor-Trailer Truck Drivers	23,860	28.47	9.70	76
Truck Driver Helpers	3,700	4.40	23.32	25
Truck Drivers, Heavy	8,310	9.92	24.14	23
Truck Drivers, Light	5,300	6.32	23.13	25
All Other Mechanics and Repairers	80	.09	na	na
All Other Skilled Craftsmen and Kindred Workers	600	.71	na	na
All Other Operatives and Semi-skilled Workers	560	.67	na	na
All Other Laborers and Unskilled Workers	6,650	7.94	na	na
CLERICAL OCCUPATIONS, TOTAL	12,800	15.27	na	na
Clerical Supervisors, Office or Plant	490	.58	31.14	27
Accounting Clerks	350	.41	20.45	22
Adjustment Clerks	450	.53	18.99	29
Bookkeepers, Hand	800	.95	40.23	16
Bookkeeping and/or Billing Machine Operators	270	.32	29.91	16
Cashiers	320	.38	24.70	27
Computer Operators	70	.08	37.69	10
Dispatchers - Vehicle, Service, or Work	1,800	2.14	15.26	57
File Clerks	240	.28	24.73	24
General Clerks, Office	4,040	4.82	14.77	56
Keypunch Operators	160	.18	25.10	11
Manifest Clerks	80	.09	32.35	10
Payroll and/or Timekeeping Clerks	220	.25	22.74	28
Personnel Clerks	50	.06	26.70	14
Rate Clerks, Freight	560	.66	14.24	35
Receptionists	60	.06	36.76	9
Secretaries	810	.96	29.12	41
Stenographers	40	.05	37.67	9
Stock Clerks-Stockroom, Warehouse, or Storage Yard	340	.40	39.82	16
Switchboard Operator-Receptionists	60	.07	18.48	21

Table 3 (Continued) Trucking, Local and Long Distance, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS, (Continued)				
Typists	280	.33	24.15	18
All Other Office Machine Operators	[2/]			
All Other Office Clerical Workers	[2/]			
All Other Plant Clerical Workers	800	.95	na	na
SALES OCCUPATIONS, TOTAL	1,220	1.45	na	na
Traffic Agents	620	.73	20.72	34
All Other Sales Agents, Associates, and/or Representatives	590	.70	na	na
All Other Sales Workers	[2/]			

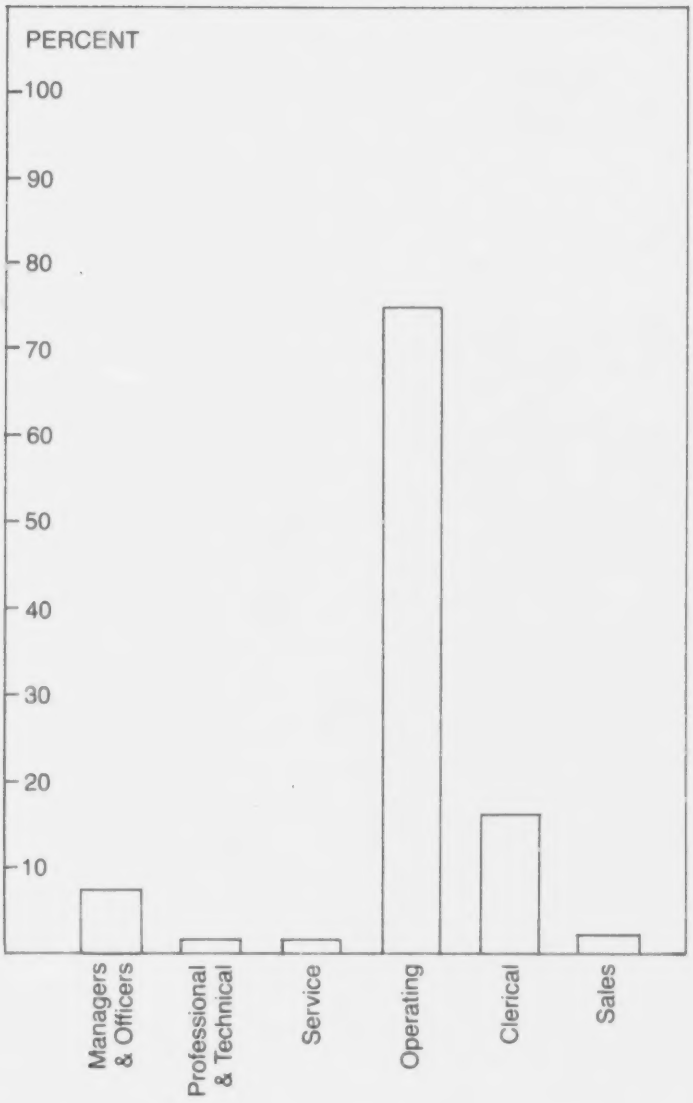
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers	89
Tractor-Trailer Truck Drivers	76
Dispatchers-Vehicle, Service, or Work	57
General Clerks, Office	56
Diesel Mechanics	47

GRAPH 3
SIC 421

TRUCKING, LOCAL AND LONG DISTANCE



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 4
SIC 422
Public Warehousing
Statewide

This group includes establishments primarily engaged in the storage of farm products, perishable goods under refrigeration, household goods, general warehousing and storage, and storage of special products, not elsewhere classified.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	7,720	100.00	na	na
MANAGERS AND OFFICERS.....	950	12.32	17.28	94
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	110	1.42	na	na
Accountants and Auditors.....	60	.75	45.99	20
All Other Professional and Technical Workers.....	[2/]			
SERVICE OCCUPATIONS, TOTAL.....	180	2.31	na	na
Janitors, Porters, and Cleaners	120	1.50	42.93	37
All Other Service Workers.....	[2/]			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	4,480	58.23	na	na
Supervisors, Nonworking.....	280	3.66	14.92	48
Industrial Truck Operators.....	1,050	13.57	12.94	60
Maintenance Repairers, General Utility.....	60	.79	26.47	18
Mechanics, Automotive.....	80	1.03	25.14	22
Order Fillers.....	120	1.57	30.36	14
Truck Drivers, Light.....	140	1.87	48.64	15
All Other Mechanics and Repairers.....	150	1.95	na	na
All Other Skilled Craftsmen and Kindred Workers.....	[2/]			
All Other Operatives and Semi-skilled Workers.....	610	7.88	na	na

Table 4 (Continued) Public Warehousing, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
All Other Laborers and Unskilled Workers.....	2/			
CLERICAL OCCUPATIONS, TOTAL.....	1,960	25.20	na	na
Bookkeepers, Hand.....	170	2.14	35.41	29
Bookkeeping and/or Billing Machine Operators.....	140	1.81	39.42	14
General Clerks, Office.....	370	4.84	15.55	58
Secretaries.....	100	1.27	33.13	34
Shipping and/or Receiving Clerks.....	200	2.54	19.96	31
Shipping Packers.....	350	4.48	34.93	18
Stock Clerks-Stockroom, Warehouse, or Storage Yard.....	430	5.52	28.82	23
All Other Office Machine Operators.....	2/			
All Other Office Clerical Workers.....	120	1.56	na	na
All Other Plant Clerical Workers.....	50	.61	na	na
SALES OCCUPATIONS, TOTAL.....	40	.52	na	na

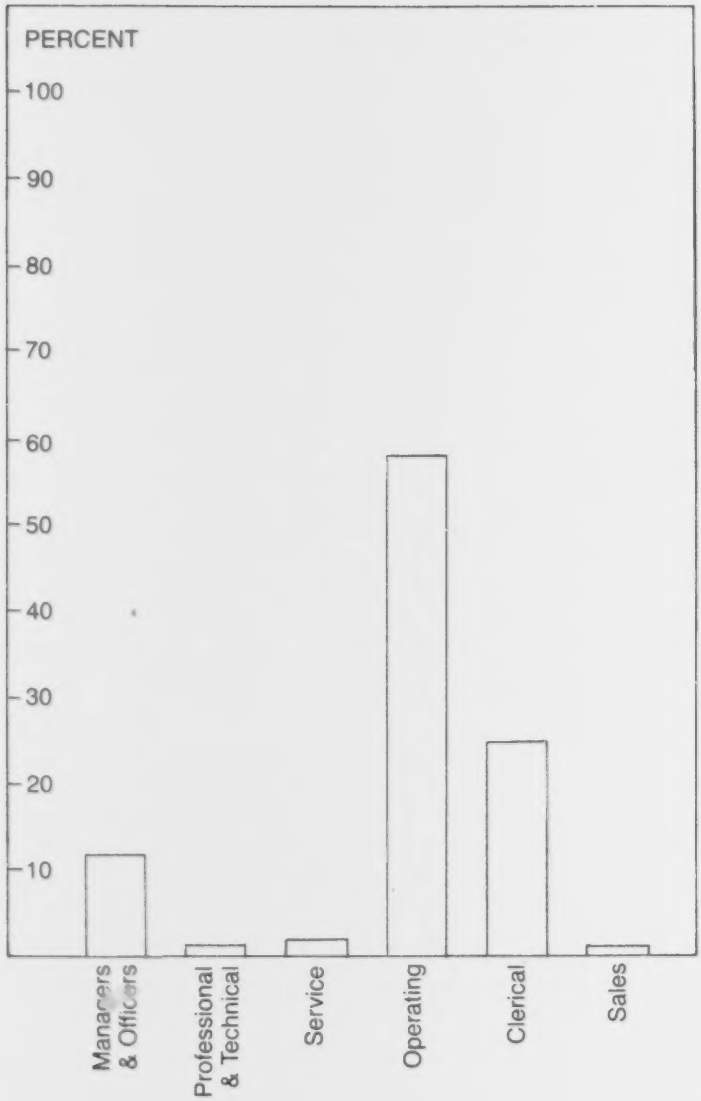
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers.....	94
Industrial Truck Operators.....	60
General Clerks, Office.....	58
Supervisors, Nonworking.....	48
Janitors, Porters, and Cleaners.....	37

GRAPH 4
SIC 422

PUBLIC WAREHOUSING



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 5
SIC 442
Deep Sea Domestic Transportation
Statewide

This group includes establishments primarily engaged in deep sea domestic transportation--transportation to and between noncontiguous territories, coastwide transportation, and intercoastal transportation.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	1,030	100.00	na	na
MANAGERS AND OFFICERS, TOTAL.....	80	7.86	na	na
Captains, Water Vessel.....	40	3.73	5.17	50
All Other Managers and Officers	2/			
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	90	8.63	na	na
Radio Operators.....	30	3.25	30.78	67
All Other Professional and Technical Workers.....	60	5.37	na	na
SERVICE OCCUPATIONS, TOTAL.....	140	13.71	na	na
Food Service Workers.....	80	7.86	6.99	50
Stewards, Ship.....	60	5.56	22.43	50
All Other Service Workers.....	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	650	62.99	na	na
Supervisors, Nonworking.....	100	9.68	3.82	50
Able Seamen.....	120	11.79	10.42	50
Ordinary Seamen.....	130	12.55	8.26	67
Ship Engineers.....	110	10.54	15.29	50
All Other Skilled Craftsmen and Kindred Workers.....	2/			
All Other Operatives and Semi-skilled Workers.....	2/			
All Other Laborers and Unskilled Workers.....	2/			

Table 5 (Continued) Deep Sea Domestic Transportation, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS.....	[2]			
SALES OCCUPATIONS.....	[2]			

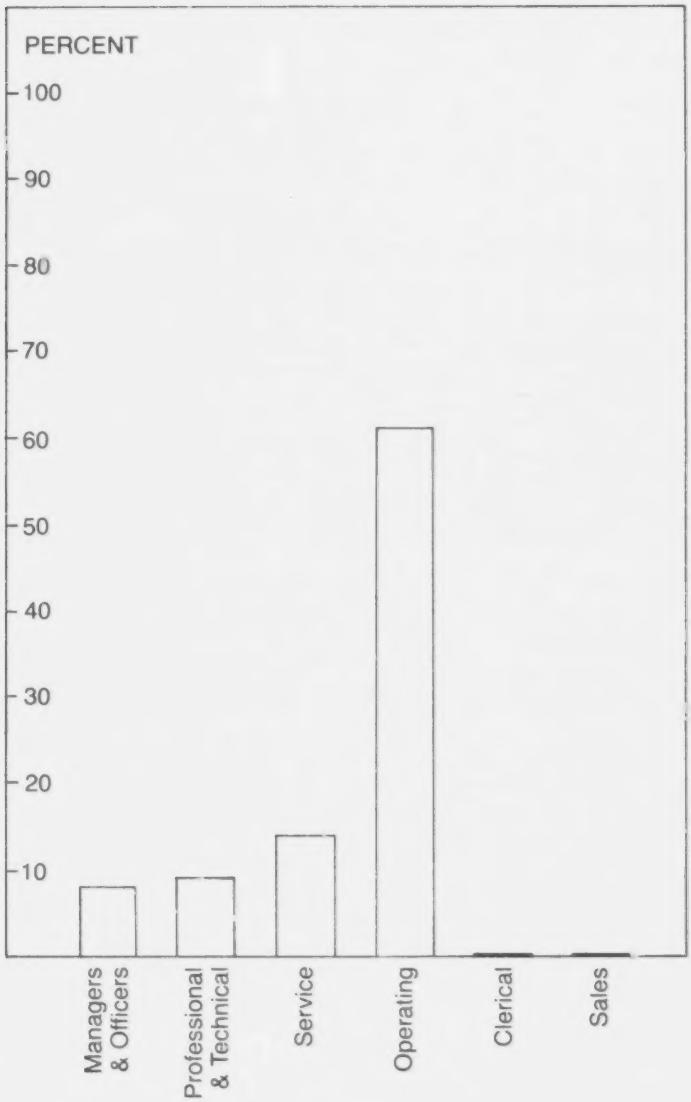
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Ordinary Seamen.....	67
Radio Operators.....	67
Able Seamen.....	50
Captains, Water Vessel.....	50
Food Service Workers.....	50
Ship Engineers.....	50
Stewards, Ship.....	50
Supervisors, Nonworking.....	50

GRAPH 5
SIC 442

DEEP SEA DOMESTIC TRANSPORTATION



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 6
SIC 45
Transportation by Air
Statewide

This major group includes establishments engaged in furnishing domestic and foreign transportation by air and also those operating airports and flying fields and furnishing terminal services. Establishments primarily engaged in performing services which may incidentally use airplanes (crop dusting, aerial photography, etc.) are classified according to the service performed.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	32,890	100.00	na	na
MANAGERS AND OFFICERS.....	1,620	4.94	13.26	96
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	6,170	18.75	na	na
Accountants and Auditors.....	60	.18	23.92	17
Airplane Pilots.....	4,410	13.42	18.02	42
Computer Programmers.....	180	.53	31.53	8
Electrical and Electronic Technicians.....	80	.23	19.15	10
Flight Engineers.....	470	1.41	35.55	12
Personnel and Labor Relations Specialists.....	30	.09	15.37	13
Purchasing Agents and/or Buyers	50	.14	39.73	21
Systems Analysts, Electronic Data Processing.....	30	.10	19.32	10
All Other Professional Workers.	820	2.49	na	na
All Other Technical Workers....	[2/]			
SERVICE OCCUPATIONS, TOTAL.....	6,380	19.40	na	na
Supervisors, Nonworking-Service.....	100	.30	25.03	17
Baggage Porters.....	220	.66	24.11	15
Flight Attendants.....	5,810	17.69	12.96	15
Janitors, Porters, and Cleaners	120	.36	27.94	33
All Other Service Workers.....	130	.39	na	na

Table 6 (Continued) Transportation by Air, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	8,200	24.88	na	na
Supervisors, Nonworking	250	.76	22.67	27
Baggage Handlers	1,210	3.69	33.42	8
Cleaners, Vehicle	420	1.26	25.06	23
Electricians	40	.11	30.83	8
Electronic Mechanics	360	1.08	20.16	19
Line-Service Attendants	1,420	4.31	26.65	46
Mechanics, Aircraft	3,440	10.46	13.72	75
Mechanics, Automotive	170	.50	12.10	25
Mechanics, Maintenance	110	.31	27.30	12
Radio Mechanics	210	.62	30.78	23
Truck Drivers	40	.12	45.31	8
All Other Skilled Craftsmen and Kindred Workers	230	.69	na	na
All Other Operatives and Semi-skilled Workers	190	.57	na	na
All Other Laborers and Unskilled Workers	[2]			
CLERICAL OCCUPATIONS, TOTAL	10,370	31.58	na	na
Clerical Supervisors, Office or Plant	190	.58	27.55	17
Accounting Clerks	240	.74	27.76	46
Computer Operators	50	.14	31.75	6
Crew Schedulers	100	.30	15.89	12
Dispatchers, Airplane	130	.40	35.63	17
General Clerks, Office	290	.87	35.29	17
Keypunch Operators	90	.28	24.83	10
Payroll and/or Timekeeping Clerks	150	.44	30.99	33
Peripheral EDP Equipment Operators	100	.29	28.64	6
Reservation Agents	3,510	10.68	25.05	23
Secretaries	460	1.40	16.21	67
Stenographers	80	.23	15.64	12
Stock Clerks-Stockroom, Warehouse or Storage Yard	340	1.03	18.29	42
Switchboard Operators	50	.14	37.52	6
Ticket Agents	2,280	6.95	32.95	25
Transportation Agents	1,830	5.56	34.62	21
Typists	40	.13	16.44	21
All Other Office Machine Operators	[2]			

Table 6 (Continued) Transportation by Air, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS, (Continued)				
All Other Office Clerical Workers.....	2/			
All Other Plant Clerical Workers.....	110	.33	na	na
SALES OCCUPATIONS, TOTAL.....	150	.44	na	na
Sales Representatives, Agents, and/or Associates.....	140	.41	33.70	23
All Other Sales Workers.....	2/			

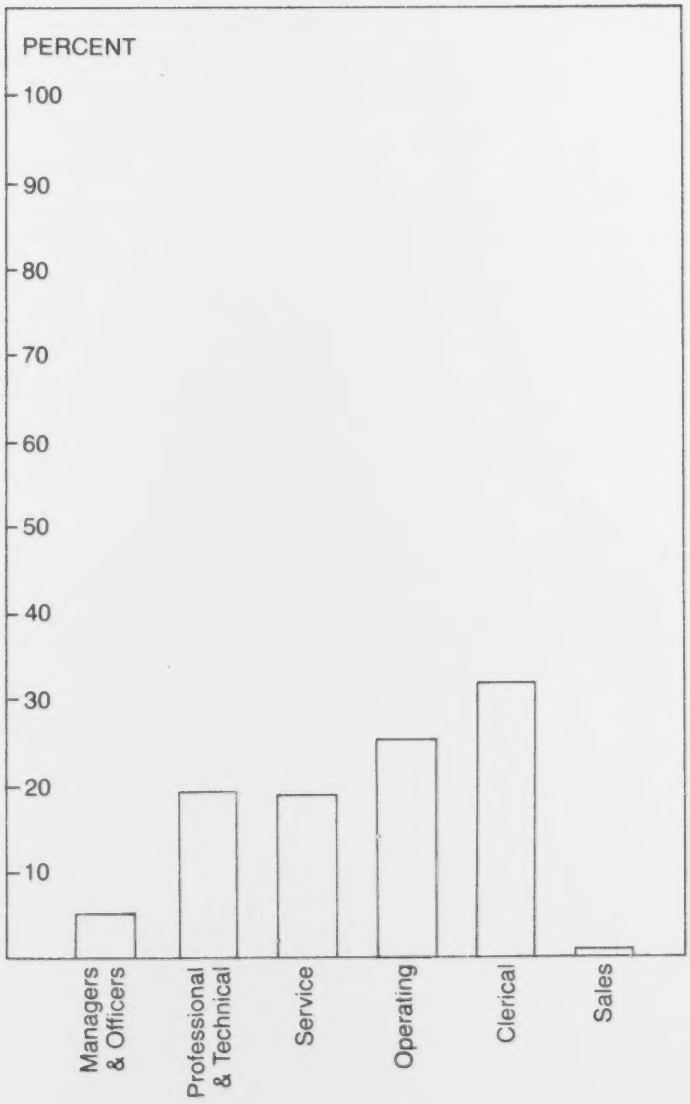
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers.....	96
Mechanics, Aircraft.....	75
Secretaries.....	67
Accounting Clerks.....	46
Line-Service Attendants.....	46

GRAPH 6
SIC 45

TRANSPORTATION BY AIR



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 7
SIC 451
Air Transportation, Certificated Carriers
Statewide

This group includes establishments of companies holding certificates of public convenience and necessity under the Civil Aeronautics Act, operating over fixed routes on fixed schedules, or in the case of certificated Alaskan carriers over fixed or irregular routes. The companies may be primarily engaged in the transportation of revenue passengers or in the transportation of cargo or freight.

Occupation	Estimated Empl.	% of Total Empl.[1]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	27,620	100.00	na	na
MANAGERS AND OFFICERS.....	1,030	3.71	20.21	100
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	5,310	19.25	na	na
Accountants and Auditors.....	40	.14	19.28	25
Airplane Pilots.....	3,840	13.95	20.38	50
Computer Programmers.....	170	.61	32.43	15
Flight Engineers.....	450	1.61	36.97	15
Teachers and/or Instructors, Vocational Education or Training.....	30	.11	23.32	20
All Other Professional Workers.	710	2.57	na	na
All Other Technical Workers....	70	.24	na	na
SERVICE OCCUPATIONS, TOTAL.....	6,270	22.73	na	na
Supervisors, Nonworking-Service.....	100	.34	23.91	40
Baggage Porters.....	220	.79	24.11	40
Flight Attendants.....	5,810	21.09	12.96	40
Food Service Workers.....	70	.23	20.76	25
Janitors, Porters, and Cleaners.....	50	.18	44.75	15
All Other Service Workers.....	[2]			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	5,460	19.79	na	na
Supervisors, Nonworking.....	140	.49	20.09	35
Baggage Handlers.....	1,210	4.40	33.42	20

Table 7 (Continued) Air Transportation, Certificated Carriers, Statewide

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Cleaners, Vehicle	370	1.33	25.42	40
Electronic Mechanics	270	.96	25.15	20
Line-Service Attendants	1,040	3.77	33.73	60
Mechanics, Aircraft	1,890	6.87	21.51	70
Mechanics, Automotive	140	.51	13.56	45
Mechanics, Maintenance	100	.34	27.17	20
Radio Mechanics	160	.58	17.67	35
All Other Skilled Craftsmen and Kindred Workers	2/			
All Other Operatives and Semi-skilled Workers	110	.38	na	na
CLERICAL OCCUPATIONS, TOTAL	9,460	34.19	na	na
Clerical Supervisors, Office or Plant	190	.68	28.25	35
Accounting Clerks	190	.67	36.07	50
Computer Operators	50	.17	31.75	15
Crew Schedulers	90	.31	14.36	25
Dispatchers, Airplane	50	.16	31.41	20
General Clerks, Office	270	.97	37.29	15
Keypunch Operators	90	.32	25.66	15
Payroll and/or Timekeeping Clerks	50	.17	19.94	30
Reservation Agents	3,510	12.73	25.05	60
Secretaries	250	.91	19.10	60
Stenographers	70	.24	17.95	25
Stock Clerks-Stockroom, Warehouse, or Storage Yard	270	.96	21.51	55
Switchboard Operators	50	.17	37.52	15
Ticket Agents	2,280	8.28	32.95	65
Transportation Agents	1,820	6.59	34.85	50
All Other Office Machine Operators	80	.28	na	na
All Other Office Clerical Workers	140	.49	na	na
All Other Plant Clerical Workers	2/			

Table 7 (Continued) Air Transportation, Certificated Carriers, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
SALES OCCUPATIONS, TOTAL.....	90	.32	na	na
Sales Representatives, Agents, and/or Associates.....	90	.31	28.08	35

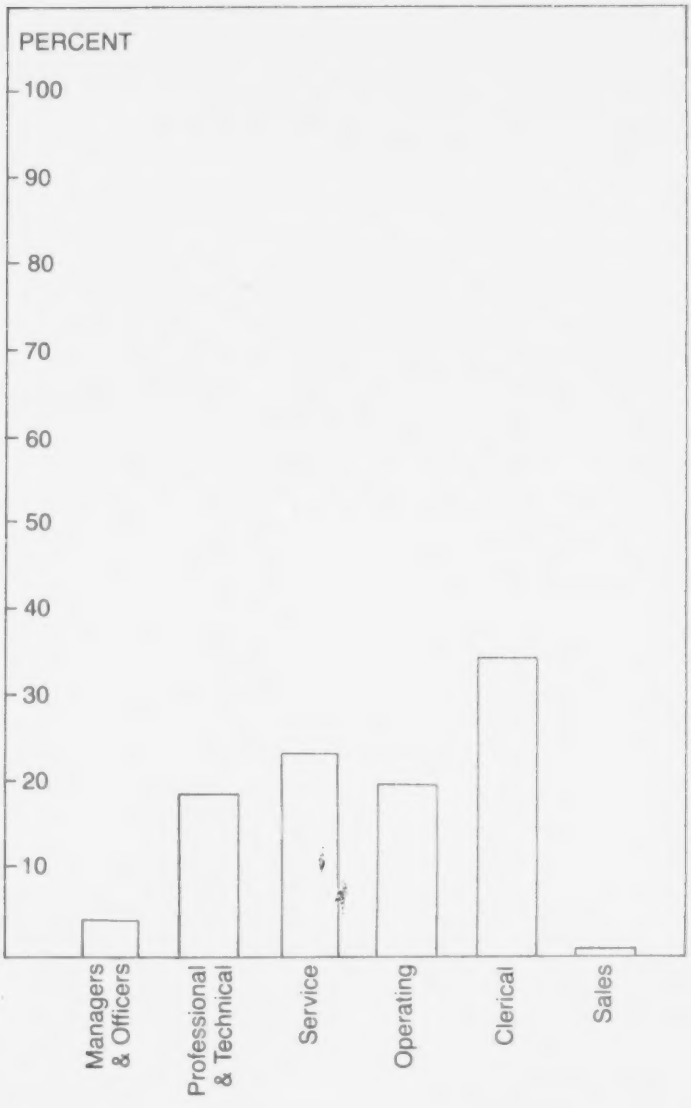
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers.....	100
Mechanics, Aircraft.....	70
Ticket Agents.....	65
Line-Service Attendants.....	60
Reservation Agents.....	60
Secretaries.....	60

GRAPH 7
SIC 451

AIR TRANSPORTATION, CERTIFICATED CARRIERS



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 8
SIC 48 (Excludes SIC 483)
Communication
Statewide

This major group includes establishments primarily engaged in furnishing telephone communication service; telegraphic communication service; and communication services, not elsewhere classified. Radio and television broadcasting stations (SIC 483) are excluded.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	69,990	100.00	na	na
MANAGERS AND OFFICERS.....	5,640	8.06	7.84	96
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	2,970	4.25	na	na
Accountants and Auditors.....	220	.32	10.73	23
Drafters.....	420	.60	18.60	32
Personnel and Labor Relations Specialists.....	50	.07	8.08	14
All Other Professional Workers.	[2/]			
All Other Technical Workers....	1,500	2.14	na	na
SERVICE OCCUPATIONS, TOTAL.....	270	.38	na	na
Janitors, Porters, and Cleaners.....	260	.36	16.27	32
All Other Service Workers.....	[2/]			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	23,570	33.66	na	na
Supervisors, Nonworking.....	1,270	1.80	24.19	34
Cable Installers.....	580	.82	14.75	20
Cable Repairers.....	1,110	1.57	5.30	32
Cable Splicers.....	1,690	2.41	4.76	37
Central Office Repairers.....	4,760	6.80	4.10	37
Frame Wirers.....	1,010	1.43	5.56	30
Installers, Repairers, and/or Section Maintainers.....	2,810	4.01	6.51	52

Table 8 (Continued) Communication, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Line Installer-Repairers	1,350	1.93	22.64	52
Radio Mechanics	250	.35	10.46	24
Station Installers	4,790	6.84	6.39	38
Stationary Engineers	150	.22	9.85	21
Telegraph Equipment Maintainers	130	.18	11.64	19
Teletype Installers	110	.15	25.19	3
Trouble Locators, Test Desk	750	1.06	4.25	30
All Other Skilled Craftsmen and Kindred Workers	2,620	3.75	na	na
All Other Operatives and Semi-skilled Workers	[2/]			
All Other Laborers and Unskilled Workers	60	.08	na	na
CLERICAL OCCUPATIONS, TOTAL	34,160	48.81	na	na
Clerical Supervisors, Office or Plant	710	1.00	17.55	36
Accounting Clerks	790	1.12	10.11	32
Cashiers	400	.56	39.11	38
Central Office Operators	6,610	9.44	8.69	40
Collectors	120	.17	13.05	24
Computer Operators	620	.89	9.59	28
Customer Service Representatives	2,110	3.02	31.29	14
Directory Assistance Operators	4,840	6.92	4.81	34
Dispatchers-Vehicle, Service, or Work	910	1.30	9.62	33
File Clerks	230	.32	30.63	21
General Clerks, Office	2,550	3.64	14.10	36
Keypunch Operators	140	.20	8.65	24
Mail Clerks	130	.18	8.28	22
Peripheral EDP Equipment Operators	120	.16	12.40	21
Personnel Clerks	70	.09	3.49	20
Private Branch Service Advisors	120	.17	8.50	22
Production Clerks and/or Coordinators	1,120	1.60	7.08	33
Secretaries	930	1.33	13.32	58
Service Clerks	1,810	2.59	8.57	33

Table 8 (Continued) Communication, Statewide

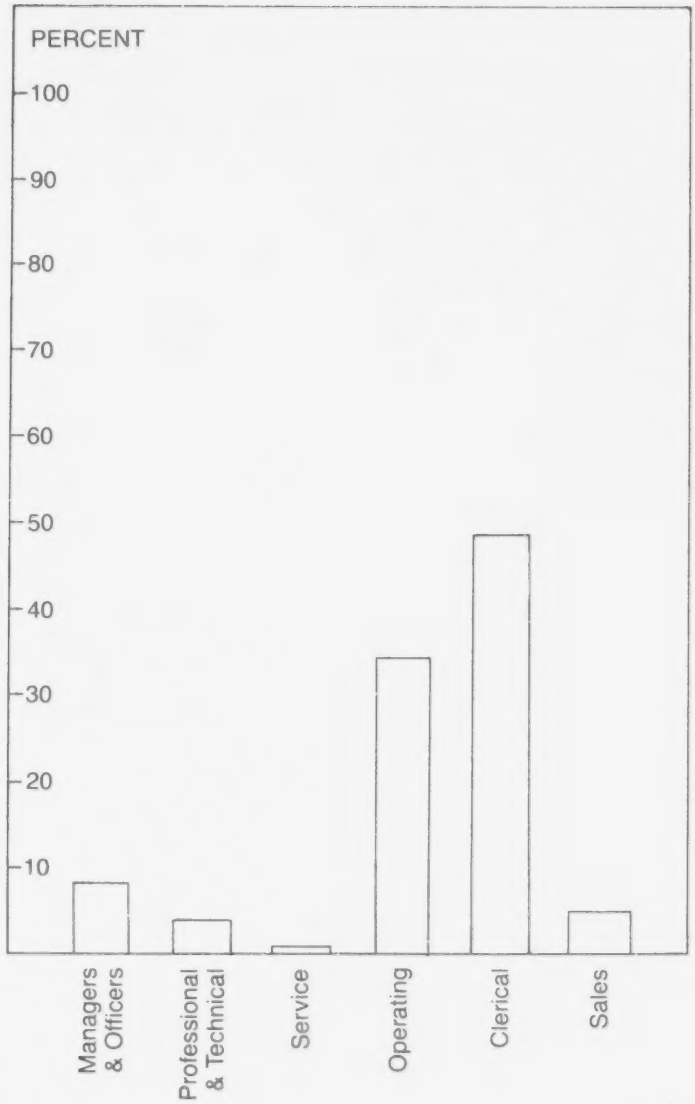
Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS, (Continued)				
Service Observers	220	.31	6.92	22
Shipping and/or Receiving Clerks	470	.66	10.15	22
Statistical Clerks	3,530	5.05	9.72	38
Stenographers	950	1.35	7.48	28
Stock Clerks - Stockroom, Warehouse, or Storage Yard	320	.45	22.25	13
Switchboard Operators	110	.15	12.34	22
Telegraph Operators	770	1.10	21.23	27
Typists	660	.94	22.51	33
All Other Office Machine Operators	60	.08	na	na
All Other Clerical Workers	2/			
SALES OCCUPATIONS, TOTAL	3,380	4.84	na	na
Sales Clerks	300	.43	20.12	9
Sales Representatives, Agents, and/or Associates	3,080	4.40	5.95	48

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers	96
Secretaries	58
Installers, Repairers, and/or Section Maintainers	52
Line Installer-Repairers	52
Sales Representatives, Agents, and/or Associates	48

GRAPH 8
SIC 48 (excludes SIC 483)
COMMUNICATION



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 9
SIC 481
Telephone Communication (Wire or Radio)
Statewide

This group includes establishments primarily engaged in furnishing telephone communication service by placing the parties in vocal conversation with each other. This industry includes domestic, international, marine, mobile, and aeronautical services.

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	65,980	100.00	na	na
MANAGERS AND OFFICERS.....	5,010	7.59	8.75	93
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	2,560	3.89	na	na
Accountants and Auditors.....	220	.33	10.80	50
Drafters.....	400	.61	19.36	60
Personnel and Labor Relations Specialists.....	50	.07	7.85	30
All Other Professional Workers.	2/			
All Other Technical Workers....	1,210	1.83	na	na
SERVICE OCCUPATIONS, TOTAL.....	250	.38	na	na
Janitors, Porters, and Cleaners.....	240	.37	16.83	58
All Other Service Workers.....	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	22,340	33.88	na	na
Supervisors, Nonworking.....	1,210	1.82	25.38	55
Cable Repairers.....	1,080	1.63	5.18	68
Cable Splicers.....	1,670	2.53	4.78	78
Central Office Repairers.....	4,760	7.22	4.10	83
Frame Wirers.....	1,010	1.52	5.56	68
Installers, Repairers, and/or Section Maintainers.....	2,610	3.95	6.80	80
Line Installer-Repairers.....	1,030	1.56	29.00	70
Radio Mechanics.....	240	.35	10.72	48

Table 9 (Continued) Telephone Communication (Wire or Radio), Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Station Installers	4,740	7.19	6.43	80
Stationary Engineers	150	.23	9.85	48
Telegraph Equipment Maintainers	130	.20	11.64	43
Trouble Locators, Test Desk	740	1.12	4.26	65
All Other Skilled Craftsmen and Kindred Workers	2,830	4.29	na	na
All Other Operatives and Semi-skilled Workers	2/			
All Other Laborers and Unskilled Workers	2/			
CLERICAL OCCUPATIONS, TOTAL	33,120	50.16	na	na
Clerical Supervisors, Office or Plant	690	1.03	18.07	65
Accounting Clerks	740	1.12	10.17	63
Central Office Operators	6,580	9.98	8.71	80
Collectors	100	.14	9.77	48
Computer Operators	610	.92	9.71	58
Customer Service Representatives	2,060	3.11	32.16	20
Directory Assistance Operators	4,840	7.34	4.81	78
Dispatchers-Vehicle, Service, or Work	890	1.35	9.80	63
File Clerks	230	.34	30.63	48
General Clerks, Office	2,470	3.74	14.50	65
Keypunch Operators	130	.19	8.12	50
Mail Clerks	130	.19	8.28	50
Peripheral EDP Equipment Operators	120	.17	12.40	48
Personnel Clerks	70	.10	2.93	43
Private Branch Service Advisors	120	.18	8.50	50
Production Clerks and/or Coordinators	1,120	1.69	7.10	73
Secretaries	780	1.17	14.74	70
Service Clerks	1,810	2.74	8.58	73
Service Observers	220	.32	6.92	50
Shipping and/or Receiving Clerks	470	.70	10.15	50
Statistical Clerks	3,520	5.33	9.76	75

Table 9 (Continued) Telephone Communication (Wire or Radio), Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS, (Continued)				
Stenographers	950	1.43	7.48	63
Stock Clerks-Stockroom, Warehouse, or Storage Yard	310	.47	22.53	25
Switchboard Operators	110	.15	12.71	45
Telegraph Operators	660	1.00	11.99	58
Typists	590	.88	24.13	55
All Other Office Machine Operators	40	.05	na	na
All Other Clerical Workers	2/			
SALES OCCUPATIONS, TOTAL	2,700	4.10	na	na
Sales Representatives, Agents, and/or Associates	2,460	3.73	5.55	78
All Other Sales Workers	2/			

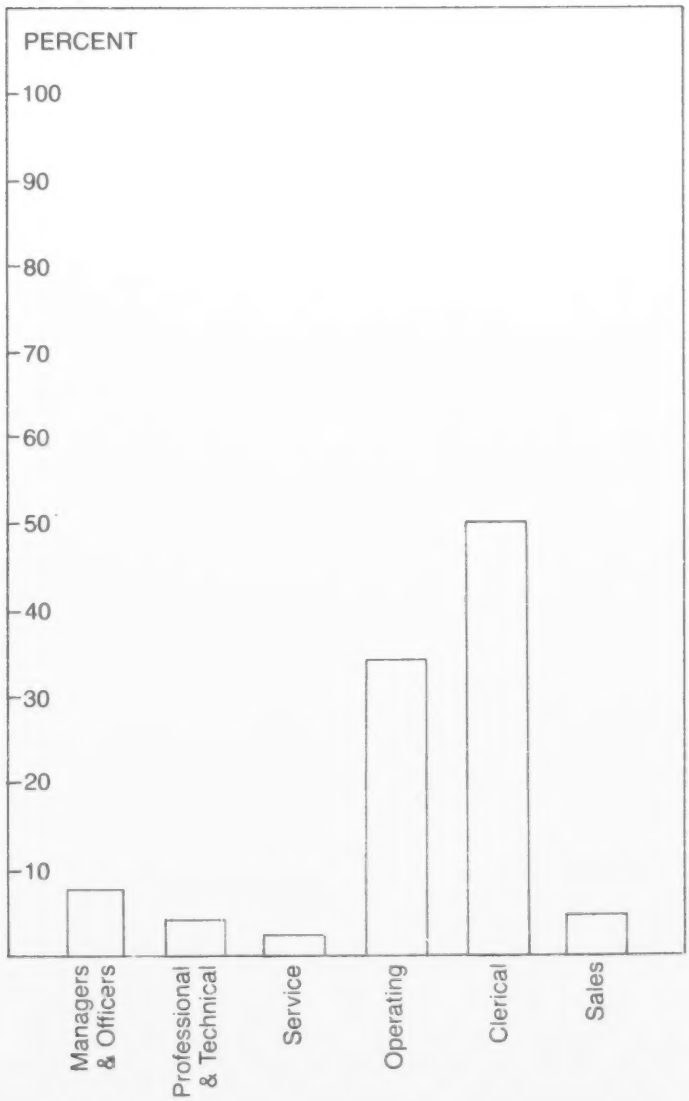
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers	93
Central Office Repairers	83
Central Office Operators	80
Installers, Repairers, and/or Section Maintainers	80
Station Installers	80

GRAPH 9
SIC 481

TELEPHONE COMMUNICATION (WIRE OR RADIO)



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 10
SIC 483
Radio and Television Broadcasting
Statewide

This group includes stations primarily engaged in radio and television broadcasting to the public. Stations engaged in the sale of time for broadcast purposes, and the furnishing of program material or service, are also included.

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	11,020	100.00	na	na
MANAGERS AND OFFICERS.....	1,640	14.91	5.06	98
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	5,870	53.27	na	na
Accountants and Auditors.....	40	.33	44.59	19
Announcers, Radio and Television.....	2,380	21.68	7.78	94
Broadcast News Analysts.....	540	4.92	12.19	63
Broadcast Technicians.....	680	6.21	12.98	48
Commercial Artists.....	60	.53	16.78	37
Electrical and Electronic Engineers.....	340	3.07	13.48	67
Electrical and Electronic Technicians.....	70	.65	40.14	12
Film Editors.....	70	.61	26.21	27
Photographers.....	210	1.87	18.84	33
Reporters and Correspondents...	440	3.95	15.04	46
Sound Recording and Reproduction Technicians.....	50	.42	36.77	15
Technical Directors.....	160	1.46	21.77	35
Television Camera Operators....	320	2.94	18.56	40
Writers and/or Editors.....	310	2.84	15.55	56
All Other Engineers.....	2/			
All Other Professional Workers.	90	.79	na	na
All Other Engineering Technicians.....	100	.88	na	na
SERVICE OCCUPATIONS, TOTAL.....	140	1.25	na	na
Janitors, Porters, and Cleaners	130	1.15	20.09	38
All Other Service Workers.....	2/			

Table 10 (Continued) Radio and Television Broadcasting, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	90	.83	na	na
Radio Mechanics	50	.41	38.47	10
All Other Skilled Craftsmen and Kindred Workers	30	.27	na	na
All Other Operatives and Semi-skilled Workers	2/			
All Other Laborers and Unskilled Workers	2/			
CLERICAL OCCUPATIONS, TOTAL	1,890	17.22	na	na
Accounting Clerks	50	.49	22.96	27
Bookkeepers, Hand	240	2.14	27.22	40
Bookkeeping and/or Billing Machine Operators	90	.80	30.09	27
Receptionists	170	1.56	18.05	38
Secretaries	240	2.17	13.86	58
Switchboard Operator-Receptionists	80	.70	22.88	38
Traffic Clerks	380	3.44	8.95	79
Typists	110	1.00	33.07	23
All Other Office Machine Operators	2/			
All Other Clerical Workers	260	2.34	na	na
SALES OCCUPATIONS, TOTAL	1,380	12.53	na	na
Sales Representatives, Agents, and/or Associates	1,370	12.44	8.05	90
All Other Sales Workers	2/			

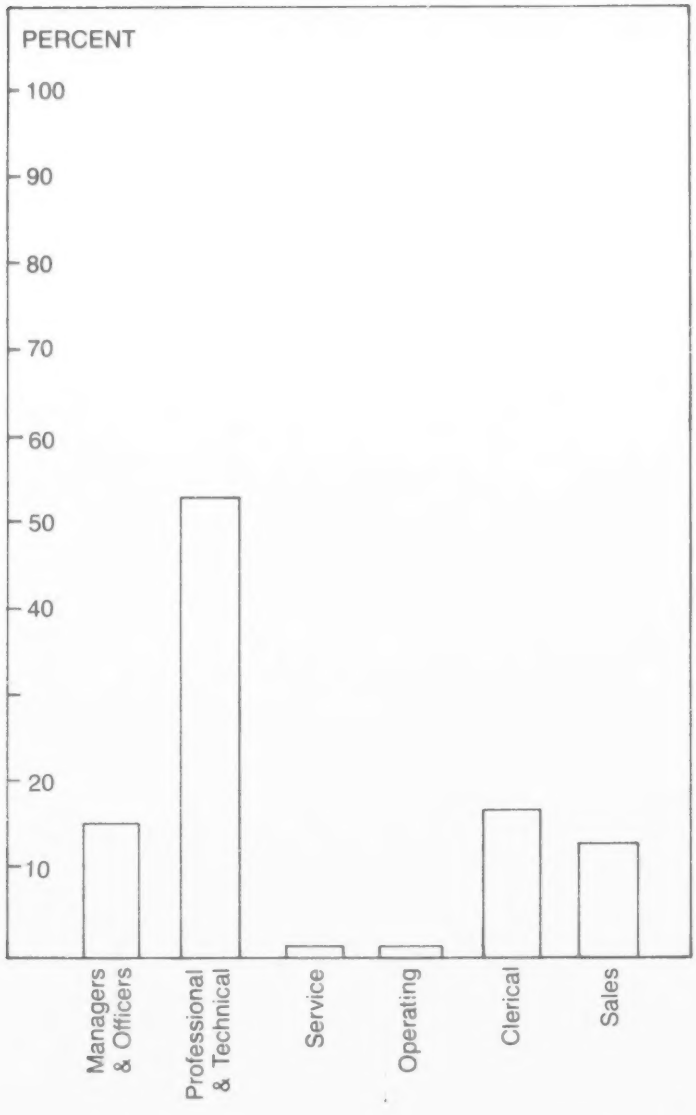
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Managers and Officers	98
Announcers, Radio and Television	94
Sales Representatives, Agents, and/or Associates	90
Traffic Clerks	79
Electrical and Electronic Engineers	67

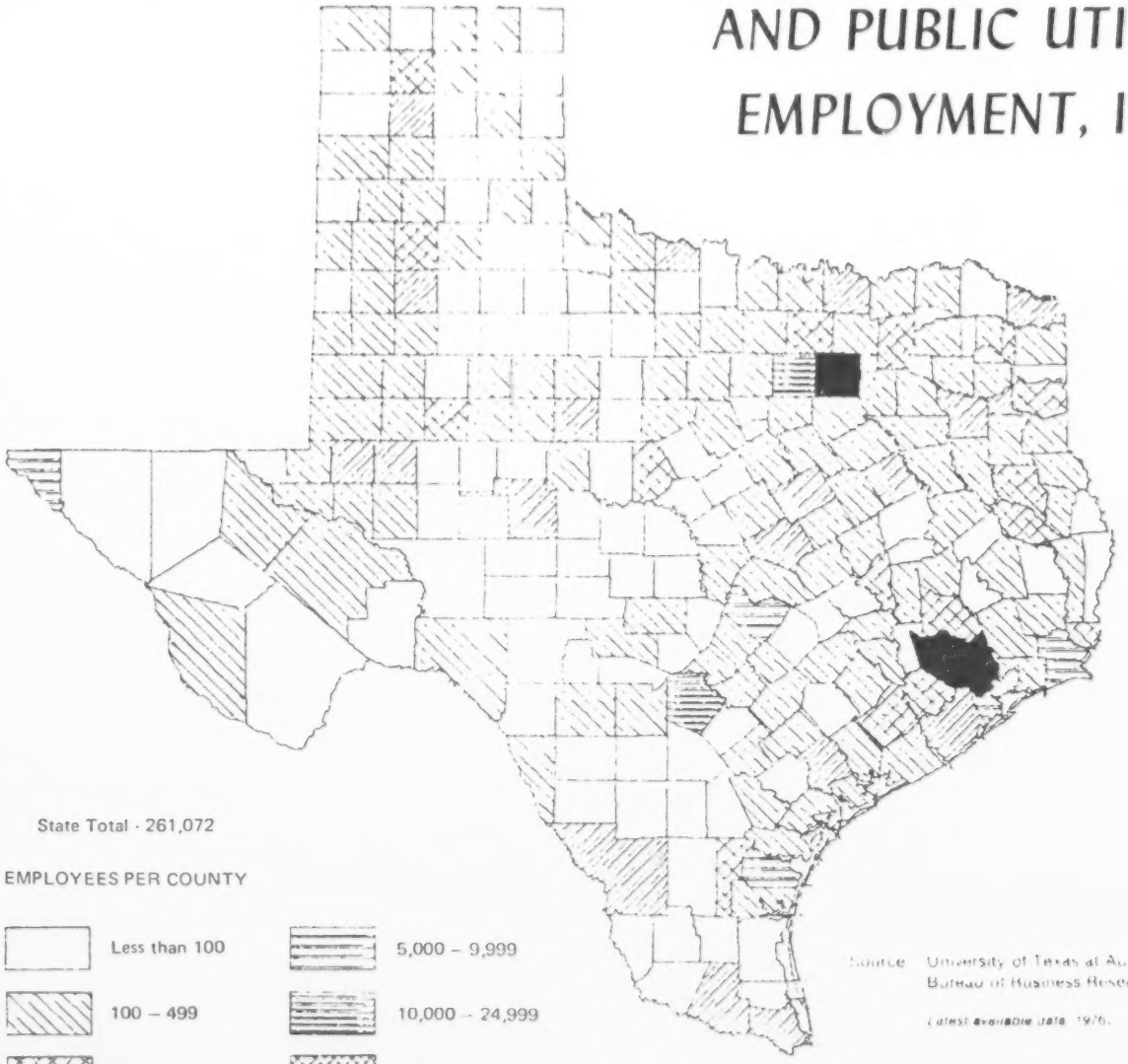
GRAPH 10
SIC 483

RADIO AND TELEVISION BROADCASTING



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

S.I.C. 40-49 TRANSPORTATION, COMMUNICATION, AND PUBLIC UTILITY EMPLOYMENT, 1975



State Total - 261,072

EMPLOYEES PER COUNTY

- Less than 100
- 100 – 499
- 500 – 999
- 1,000 – 4,999
- 5,000 – 9,999
- 10,000 – 24,999
- 25,000 – 49,999
- 50,000 and over

Source: University of Texas at Austin
Bureau of Business Research

Latest available data: 1976.

BEST AVAILABLE COPY

STAFFING PATTERNS FOR SELECTED TRADE INDUSTRIES

INDUSTRY CHARACTERISTICS

Wholesale Trade includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; or to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies. The principal types of establishments included are:

1. Merchant wholesalers--wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, wagon distributors, and cooperative buying associations.

2. Sales branches and sales offices (but not retail stores) maintained by manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products.

3. Agents, merchandise or commodity brokers, and commission merchants.

4. Petroleum bulk stations.

5. Assemblers, buyers, and associations engaged in the cooperative marketing of farm products.

Establishments primarily engaged in selling merchandise to contractors are included in Wholesale Trade, with the exception of lumber yards and paint, glass, and wallpaper stores. These exceptions are classified in Retail Trade if they sell to the general public, even if a higher proportion of their sales is made to contractors.

The chief functions of establishments included in Wholesale Trade are selling goods to trading establishments, or to industrial, commercial, institutional, farm, and professional business users; and bringing buyer and seller together. In addition to selling, functions frequently performed by wholesale establishments include maintaining inventories of goods; extending credit; physically assembling, sorting, and grading goods in large lots; breaking bulk and redistribution in smaller lots; delivery; refrigeration; and various types of promotion, such as advertising and label designing.

Retail Trade includes establishments engaged in selling merchandise for personal or household consumption, and rendering services incidental to the sale of goods. In general, retail establishments are classified by kind of business according to the principal lines of commodities sold (groceries, hardware, etc.), or the usual trade designation (drug store, cigar store, etc.). Some of the important characteristics of retail trade establishments are:

1. The establishment is usually a place of business and is engaged in activities to attract the general public to buy.

2. The establishment buys or receives merchandise as well as sells.

3. The establishment may process its products, but such processing is incidental or subordinate to selling.

4. The establishment is considered as retail in the trade.

5. The establishment sells to customers for personal or household use.

Not all of these characteristics need be present.

Buying of goods for resale to the consumer is a characteristic of retail trade establishments that particularly distinguishes them from the agricultural and extractive industries. For example, farmers who sell only their own produce at or from the point of production are not classified as retailers.

Table 11
SIC 518
Beer, Wine, and Distilled Alcoholic Beverages
Statewide

This group includes establishments primarily engaged in the wholesale distribution of beer, ale, porter, other fermented malt beverages, and distilled spirits--including neutral spirits and ethyl alcohol used in blending wines and distilled liquors.

Occupation	Estimated Empl.	% of Total Empl 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	9,760	100.00	na	na
MANAGERS AND OFFICERS, TOTAL.....	840	8.67	na	na
Managers, Merchandise.....	270	2.81	15.70	62
Wholesalers.....	500	5.09	17.39	89
All Other Managers and Officers.....	2/			
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	140	1.43	na	na
Accountants and Auditors.....	60	.64	14.33	34
Buyers, Retail and/or Wholesale Trade.....	40	.41	27.41	20
All Other Professional and Technical Workers.....	40	.37	na	na
SERVICE OCCUPATIONS, TOTAL.....	150	1.52	na	na
Janitors, Porters, and Cleaners.....	150	1.51	22.49	45
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	5,030	51.59	na	na
Supervisors, Nonworking.....	260	2.63	18.28	45
Delivery and Route Workers.....	3,510	36.04	6.82	84
Industrial Truck Operators.....	300	3.09	15.27	47
Maintenance Repairers, General Utility.....	60	.60	21.51	22
Mechanics, Automotive.....	90	.95	16.12	34

Table 11 (Continued) Beer, Wine, and Distilled Alcoholic Beverages, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Order Fillers	260	2.61	25.27	20
Truck Drivers	310	3.20	34.42	36
All Other Skilled Craftsmen and Kindred Workers	40	.41	na	na
All Other Operatives and Semi-skilled Workers	[2]			
All Other Laborers and Unskilled Workers	170	1.75	na	na
CLERICAL OCCUPATIONS, TOTAL	2,050	20.83	na	na
Accounting Clerks	170	1.73	20.23	45
Bookkeepers, Hand	110	1.12	21.35	46
Cashiers	170	1.70	20.73	36
General Clerks, Office	320	3.23	19.40	50
Keypunch Operators	70	.69	16.36	24
Order Clerks	40	.41	19.08	15
Receptionists	40	.41	41.66	15
Secretaries	190	1.97	20.90	47
Shipping and/or Receiving Clerks	70	.67	20.27	19
Shipping Packers	80	.83	25.79	9
Stock Clerks-Stockroom, Warehouse or Storage Yard	550	5.67	13.12	54
Switchboard Operator-Receptionists	90	.88	10.04	46
Typists	60	.56	26.91	15
All Other Office Clerical Workers	80	.79	na	na
All Other Plant Clerical Workers	[2]			
SALES OCCUPATIONS, TOTAL	1,550	15.96	na	na
Sales Clerks	110	1.15	43.02	9
Sales Representatives, Agents, and/or Associates, Nontechnical	1,200	12.33	11.66	57
All Other Sales Workers	[2]			

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

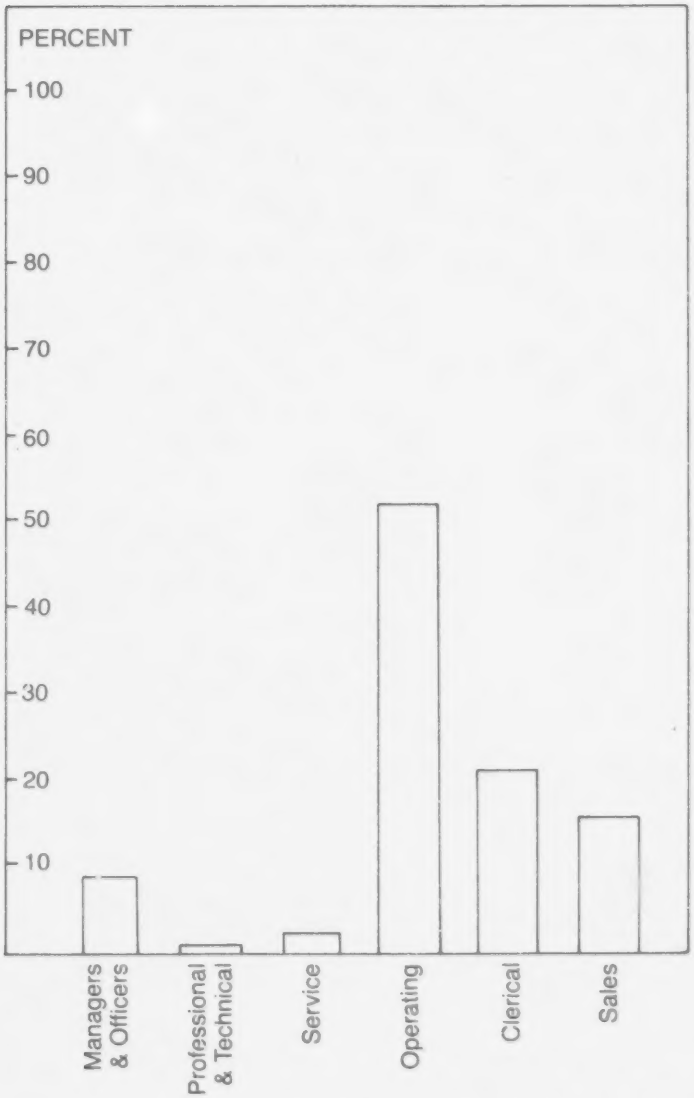
Table 11 (Continued) Beer, Wine, and Distilled Alcoholic Beverages, Statewide

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Wholesalers	89
Delivery and Route Workers	84
Managers, Merchandise	62
Sales Representatives, Agents, and/or Associates, Nontechnical	57
Stock Clerks-Stockroom, Warehouse, or Storage Yard	54

GRAPH 11
SIC 518

BEER, WINE, AND DISTILLED ALCOHOLIC BEVERAGES



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 12
SIC 551
Motor Vehicle Dealers (New and Used)
Statewide

This group includes establishments primarily engaged in the retail sale of new automobiles, or new and used automobiles. These establishments frequently maintain repair departments and carry stocks of replacement parts, tires, batteries, and automotive accessories.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	56,880	100.00	na	na
MANAGERS AND OFFICERS, TOTAL.....	6,480	11.39	na	na
Managers, Automobile Service Department.....	2,060	3.62	10.53	95
Managers, Automotive Parts Department.....	1,450	2.54	8.28	93
Managers, Store.....	2,900	5.10	9.46	93
All Other Managers and Officers	70	.12	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	1,110	1.96	na	na
Accountants and Auditors.....	1,110	1.95	12.17	67
SERVICE OCCUPATIONS, TOTAL.....	2,380	4.18	na	na
Janitors, Porters, and Cleaners	2,290	4.02	16.04	72
All Other Service Workers.....	90	.16	na	na
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	24,320	42.78	na	na
Supervisors, Nonworking.....	730	1.29	15.62	49
Automobile Repair-Service Estimators.....	1,040	1.82	19.18	51
Body Repairers, Automotive.....	3,290	5.78	9.87	70
Cleaners, Vehicle.....	3,220	5.66	19.63	74
Delivery and Route Workers.....	410	.72	27.21	30

Table 12 (Continued) Motor Vehicle Dealers (New and Used), Statewide

Occupation	Estimated Empl.	% of Total Empl.[1]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Helpers, Trades	1,350	2.38	28.27	33
Mechanics, Automotive	11,740	20.65	5.52	98
Painters, Automotive	1,190	2.08	17.70	58
Service Station Attendants, Fuel Pump Attendants, and/or Lubricators	360	.62	35.00	21
Truck Drivers	240	.42	43.09	21
All Other Mechanics and Repairers	[2]			
All Other Skilled Craftsmen and Kindred Workers	110	.19	na	na
All Other Operatives and Semi-skilled Workers	[2]			
CLERICAL OCCUPATIONS, TOTAL	8,510	14.95	na	na
Accounting Clerks	1,570	2.76	15.81	58
Bookkeepers, Hand	990	1.74	23.41	49
Cashiers	820	1.43	14.99	56
General Clerks, Office	2,060	3.61	17.67	65
Secretaries	460	.81	31.31	35
Stock Clerks, Stockroom, Warehouse, or Storage Yard	2,000	3.51	15.29	70
Switchboard Operator-Receptionists	290	.50	16.96	35
Switchboard Operators	240	.42	36.51	26
All Other Office Clerical Workers	80	.13	na	na
SALES OCCUPATIONS, TOTAL	14,080	24.74	na	na
Sales Clerks	800	1.40	29.48	26
Sales Representatives, Agents, and/or Associates-Nontechnical	9,210	16.19	10.24	74
Sales Representatives, Agents, and/or Associates-Technical	4,070	7.15	28.70	37

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

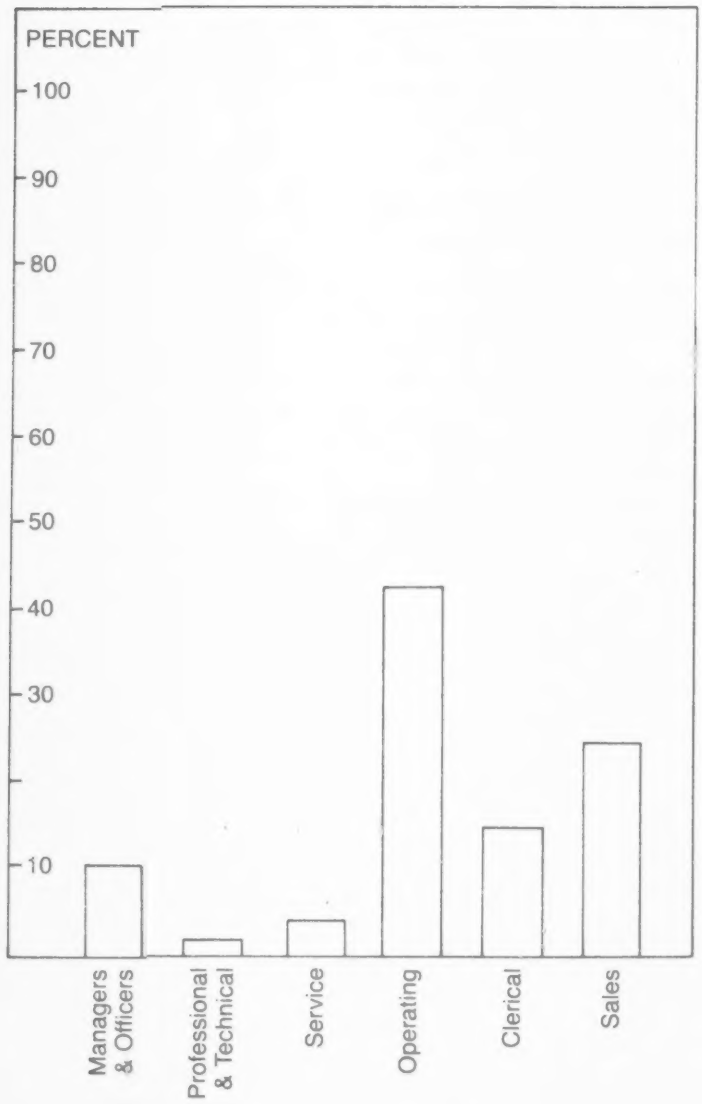
Table 12 (Continued) Motor Vehicle Dealers (New and Used), Statewide

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Mechanics, Automotive	98
Managers, Automobile Service Department	95
Managers, Automotive Parts Department	93
Managers, Store	93
Cleaners, Vehicle	74
Sales Representatives, Agents, and/or Associates-Nontechnical	74

GRAPH 12
SIC 551

MOTOR VEHICLE DEALERS (NEW AND USED)



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 13
SIC 557
Motorcycle Dealers
Statewide

This group includes establishments primarily engaged in the retail sale of new and used motorcycles and motor scooters.

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	1,880	100.00	na	na
MANAGERS AND OFFICERS, TOTAL.....	450	23.43	na	na
Managers, Automobile Service Department.....	130	6.72	10.26	62
Managers, Automotive Parts Department.....	140	7.25	9.29	65
Managers, Store.....	170	9.24	8.14	76
All Other Managers and Officers	2/			
PROFESSIONAL AND TECHNICAL OCCUPATIONS.....	2/			
SERVICE OCCUPATIONS.....	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	730	39.20	na	na
Helpers, Trade.....	60	3.01	37.64	13
Mechanics, Automotive.....	570	30.53	5.55	89
All Other Mechanics and Repairers.....	2/			
All Other Skilled Craftsmen and Kindred Workers.....	2/			
All Other Operatives and Semi-skilled Workers.....	2/			
All Other Laborers and Unskilled Workers.....	2/			
CLERICAL OCCUPATIONS, TOTAL.....	230	12.76	na	na
Bookkeepers, Hand.....	70	3.97	14.93	40
General Clerks, Office.....	30	1.82	23.53	20

Table 13 (Continued) Motorcycle Dealers, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS (Continued)				
Secretaries	30	1.61	28.90	15
Stock Clerks - Stockroom, Warehouse, or Storage Yard	60	3.01	30.24	18
All Other Office Clerical Workers	2/			
SALES OCCUPATIONS, TOTAL	430	22.63	na	na
Sales Clerks	160	8.60	18.44	38
Sales Representatives, Agents, and/or Associates-Nontechnical	150	7.79	17.95	40
Sales Representatives, Agents, and/or Associates-Technical	120	6.29	21.49	31

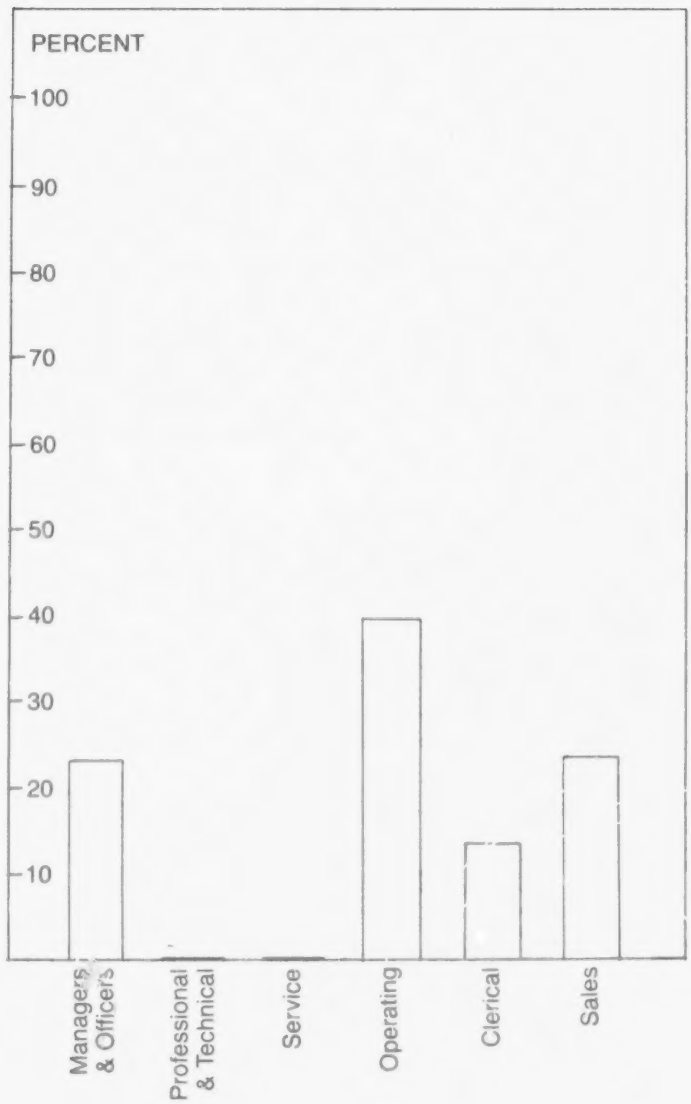
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Mechanics, Automotive	89
Managers, Store	76
Managers, Automotive Parts Department	65
Managers, Automobile Service Department	62
Bookkeepers, Hand	40
Sales Representatives, Agents, and/or Associates-Nontechnical	40

GRAPH 13
SIC 557

MOTORCYCLE DEALERS



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 14
SIC 596
Nonstore Retailers
Statewide

This group includes establishments primarily engaged in the retail sale of products by catalog and mail order, by means of automatic merchandising units--vending machines, and the telephone or house-to-house canvass.

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	14,120	100.00	na	na
MANAGERS AND OFFICERS, TOTAL.....	1,070	7.55	na	na
Managers, Merchandise.....	200	1.38	39.55	19
Managers, Store.....	270	1.91	21.14	36
All Other Managers and Officers.....	600	4.25	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	750	5.34	na	na
Accountants and Auditors.....	100	.71	26.16	28
Buyers, Retail and/or Wholesale Trade.....	240	1.70	13.22	17
All Other Professional and Technical Workers.....	[2/]			
SERVICE OCCUPATIONS, TOTAL.....	810	5.69	na	na
Cooks, Short Order and/or Specialty Fast Foods.....	130	.89	41.94	11
Counter Attendants-Lunchroom, Coffee Shop, or Cafeteria....	230	1.62	30.81	18
Food Preparation and Service Workers, Fast Food Restaurant.....	120	.85	31.09	8
Janitors, Porters, and Cleaners	200	1.40	17.25	32
All Other Service Workers.....	130	.91	na	na
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	5,200	36.88	na	na
Coin-Machine Servicers and/or Vending Machine Repairers....	850	5.98	31.40	36

Table 14 (Continued) Nonstore Retailers, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
Delivery and Route Workers.....	1,680	11.92	21.56	43
Stock Clerks, Sales Floor.....	110	.74	14.22	7
Truck Drivers.....	280	1.99	10.85	11
All Other Mechanics and Repairers.....	310	2.20	na	na
All Other Skilled Craftsmen and Kindred Workers.....	2/			
All Other Operatives and Semi-skilled Workers.....	310	2.20	na	na
All Other Laborers and Unskilled Workers.....	2/			
CLERICAL OCCUPATIONS, TOTAL.....	4,280	30.28	na	na
Accounting Clerks.....	270	1.93	19.12	40
Bookkeepers, Hand.....	140	.97	24.87	19
Bookkeeping and/or Billing Machine Operators.....	40	.26	49.91	7
Cashiers.....	130	.89	24.52	25
Credit Authorizers.....	100	.68	41.43	17
General Clerks, Office.....	340	2.39	49.41	28
Keypunch Operators.....	210	1.51	5.91	11
Order Clerks.....	320	2.28	36.14	14
Secretaries.....	330	2.32	14.87	24
Shipping and/or Receiving Clerks.....	140	.96	32.20	14
Stock Clerks-Stockroom, Warehouse, or Storage Yard.....	530	3.72	10.85	33
Switchboard Operator-Receptionists.....	40	.26	36.90	18
All Other Office Machine Operators.....	2/			
All Other Office Clerical Workers.....	1,230	8.72	na	na
All Other Plant Clerical Workers.....	2/			
SALES OCCUPATIONS, TOTAL.....	2,010	14.27	na	na
Sales Clerks.....	920	6.53	28.85	33
Sales Representatives, Agents, and/or Associates, Nontechnical.....	720	5.10	47.15	22

Table 14 (Continued) Nonstore Retailers, Statewide

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
SALES OCCUPATIONS, (Continued)				
Sales Representatives, Agents, and/or Associates, Technical.	230	1.64	43.23	14
All Other Sales Workers.....	140	.99	na	na

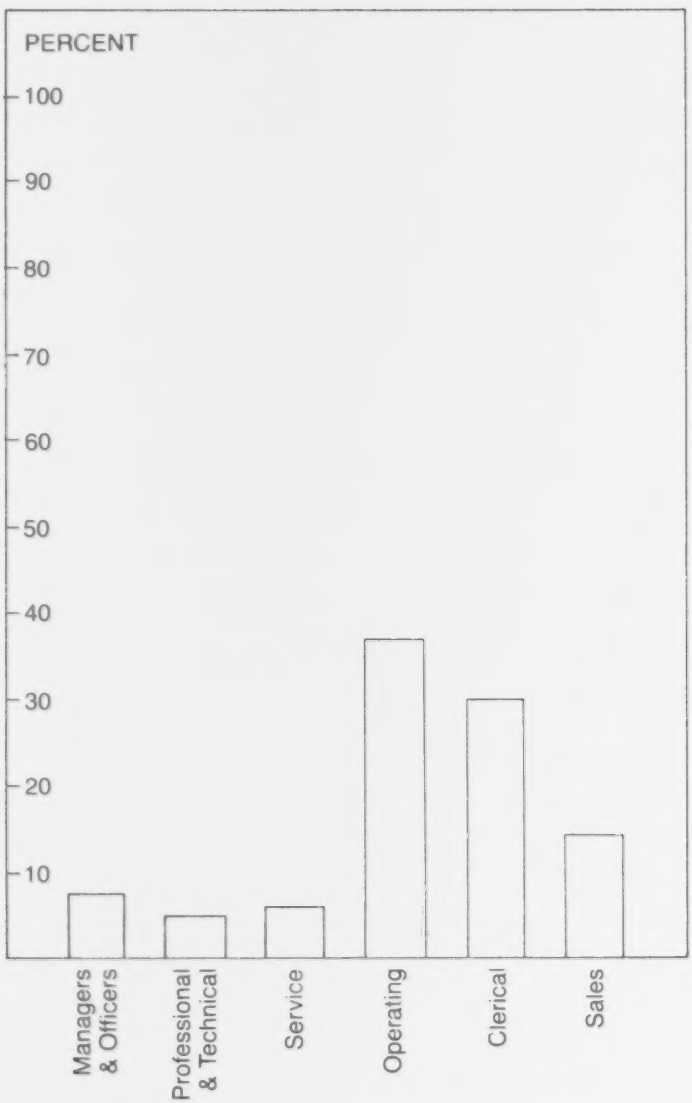
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Delivery and Route Workers.....	43
Accounting Clerks.....	40
Coin Machine Servicers and/or Vending Machine Repairers.....	36
Managers, Store.....	36
Sales Clerks.....	33
Stock Clerks-Stockroom, Warehouse, or Storage Yard....	33

GRAPH 14
SIC 596

NONSTORE RETAILERS



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

Table 15
SIC 598
Fuel and Ice Dealers
Statewide

This group includes establishments primarily engaged in the retail sale of coal, wood, ice, or any combination of these lines; fuel oil; and liquefied petroleum gas.

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	3,480	100.00	na	na
MANAGERS AND OFFICERS, TOTAL.....	410	11.81	na	na
Managers, Merchandise.....	60	1.64	18.51	19
Managers, Store.....	230	6.72	9.14	51
All Other Managers and Officers	120	3.46	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	100	2.62	na	na
Accountants and Auditors.....	30	.86	20.72	11
Buyers, Retail and/or Wholesale Trade.....	40	1.00	32.74	7
All Other Professional and Technical Workers.....	30	.75	na	na
SERVICE OCCUPATIONS, TOTAL.....	30	.81	na	na
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL.....	2,050	59.12	na	na
Delivery and Route Workers.....	880	25.33	6.80	68
Gas and Electric Appliance Repairers.....	260	7.53	10.57	46
Mechanics, Automotive.....	70	2.07	17.31	19
Truck Drivers.....	620	17.94	11.57	48
All Other Mechanics and Repairers.....	40	1.04	na	na
All Other Skilled Craftsmen and Kindred Workers.....	2/			
All Other Operatives and Semi-skilled Workers.....	2/			

Table 15 (Continued) Fuel and Ice Dealers, Statewide

Occupation	Estimated Empl.	% of Total Empl.[1/]	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, (Continued)				
All Other Laborers and Unskilled Workers.....	60	1.64	na	na
CLERICAL OCCUPATIONS, TOTAL.....	770	22.10	na	na
Accounting Clerks.....	50	1.52	24.36	9
Bookkeepers, Hand.....	200	5.65	13.81	34
Bookkeeping and/or Billing Machine Operators.....	60	1.58	21.15	15
General Clerks, Office.....	300	8.59	9.36	51
Secretaries.....	70	2.10	23.44	18
All Other Office Machine Operators.....	[2/]			
All Other Clerical Workers.....	80	2.28	na	na
SALES OCCUPATIONS, TOTAL.....	120	3.54	na	na
Sales Clerks.....	30	.95	31.80	7
Sales Representatives, Agents, and/or Associates-Technical..	60	1.75	23.35	13
All Other Sales Workers.....	30	.84	na	na

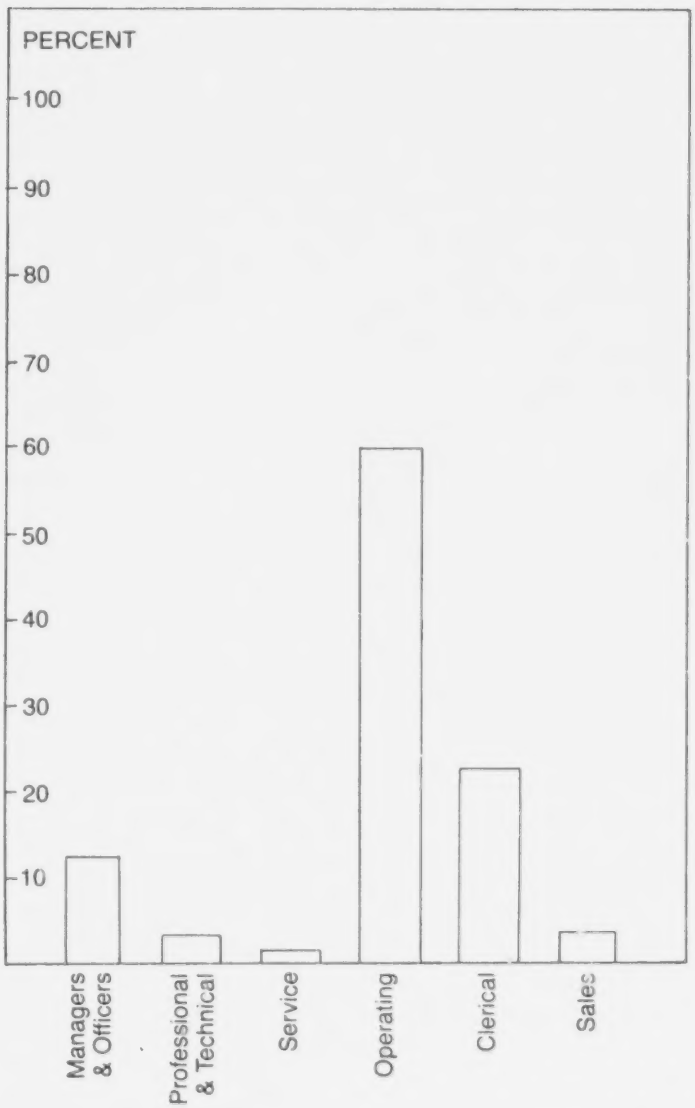
1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

OCCUPATION	PERCENT
Delivery and Route Workers.....	68
General Clerks, Office.....	51
Managers, Store.....	51
Truck Drivers.....	48
Gas and Electric Appliance Repairers.....	46

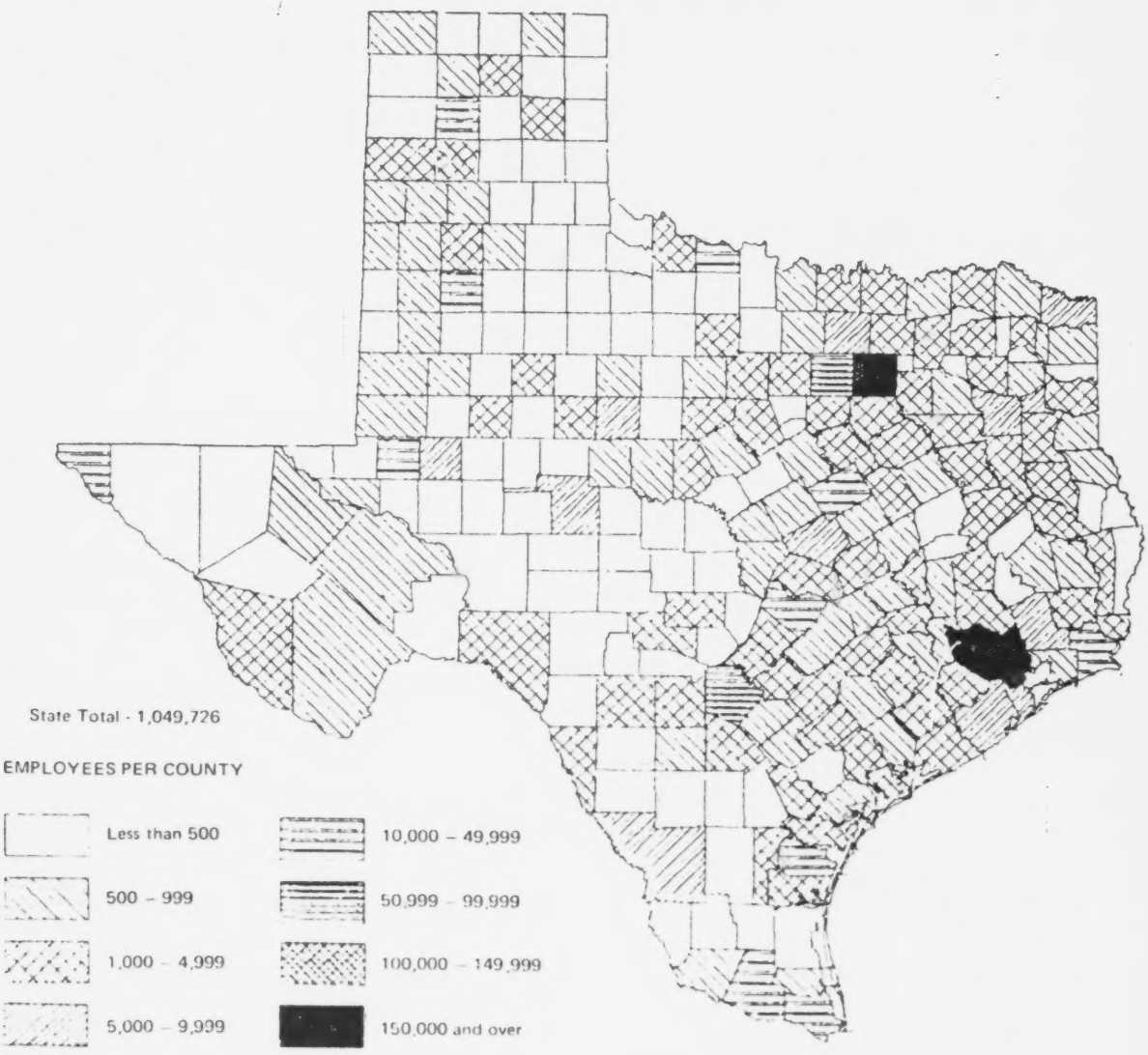
GRAPH 15
SIC 598

FUEL AND ICE DEALERS



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

S.I.C. 50-59
TRADE EMPLOYMENT, 1975



Source: University of Texas at Austin
Bureau of Business Research

Latest available data 1976.

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GLOSSARY OF TERMS

Benchmark Employment: A term which is used to identify specific employment figure(s) which existed at a particular point in time. In the OES survey program, the term benchmark is used in two ways: (1) It is the establishment or industry employment that existed at the time the sample was designed. (2) When estimates are made, it is used again to refer to the total universe employment for each estimating cell as of the reference date of the survey.

Current Employment Statistics Program: A cooperating program between the Bureau of Labor Statistics of the Department of Labor and the participating states. The primary objective of the program is the preparation of current monthly estimates, from sampled employers, of nonagricultural employment, hours of work and earnings.

ES-202: A quarterly listing of employment and contributions of all firms covered under the unemployment insurance laws of Texas. From this listing, the Trade and Regulated Industry sample was selected.

Establishment: An economic unit which produces goods or services, for example: a consulting service, a factory, or a store. In most instances, each establishment is a single physical location and is engaged in one predominate type of economic activity for which an industry code is applicable. Establishments are also referred to as reporting units.

Estimating Cell: One size class in one industry.

Sample Weight: A numerical value that is assigned to an establishment during the sample selection. For example, if an establishment has an occupational employment of 25 and a weight of three, then for estimating purposes, the 25 employment will have a representation of 75 (3 x 25).

Sampling Error: The difference between data obtained from a sample and data which would have been obtained if the same survey methods were applied to collecting identical information from the entire population.

Sampling Frame: The sampling units actually available to sample.

Sampling Units: The establishments selected randomly from the universe.

Size Class: The stratification of an industry by employment. For example: establishments with employment of 10-19 would be in one size class, and those with employment of 20-49 would be in another size class, etc.

Standard Industrial Classification (SIC): A grouping of establishments primarily engaged in the same or similar lines of economic activity. In the Trade and Regulated Industry divisions, the line of activity is generally defined as any function that excludes Manufacturing, Nonmanufacturing, and Government. Throughout this report, SIC's are correlated with a significant numerical designation. For example: SIC 421 is Trucking, Local and Long Distance; SIC 551 is Motor Vehicle Dealers (New and Used), etc.

Standard Metropolitan Statistical Area (SMSA): Includes a city (cities) of specified population which constitutes the central city and the county (counties) in which it is located. A Standard Metropolitan Statistical Area also includes contiguous counties and may also cross state lines. In New England, Standard Metropolitan Statistical Areas are composed of cities and towns instead of counties.

Universe: Total amount of establishments or units covered under the Texas Employment Security Law.

Usable Response: All receipts which, after initial classification and schedule review, are judged to contain usable OES data.

BIBLIOGRAPHY

Dallas Morning News, Texas Almanac, Dallas: A. H. Belo Corporation, 1980-1981.

Executive Office of the President/Office of Management and Budget, Standard Industrial Classification Manual, 1972, Washington, D. C.: U. S. Government Printing Office.

United States Department of Labor, U. S. Employment Service, Dictionary of Occupational Titles, Fourth Edition, 1977.

United States Department of Labor, Occupational Outlook Handbook, 1980-1981 Edition, Washington, D. C. 20402, U. S. Government Printing Office.

United States Department of Labor, Bureau of Labor Statistics, Operations Manual for Occupational Employment Survey, Second Edition, 1975.

University of Texas at Austin, Bureau of Business Research, Atlas of Texas, 1976.

TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS

INDUSTRY STAFFING PATTERNS FOR EDUCATIONAL SERVICES

TEXAS EMPLOYMENT COMMISSION
In cooperation with the U.S. Department of Labor
Bureau of Labor Statistics and the Employment
and Training Administration

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TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS

STAFFING PATTERNS FOR

EDUCATIONAL SERVICES

October 1978

Prepared by
Texas Employment Commission
Economic Research and Analysis Department
TEC Building
Austin, Texas 78778

Issued September 1980

PREFACE

This publication summarizes the results of Texas' first and only endeavor to gather occupational information from the Education sector of the economy.

This report is the product of a Federal-State Cooperative Program. The Bureau of Labor Statistics developed the procedures and provided technical assistance. The Employment and Training Administration funded the project and was responsible for the administrative aspects of the program. The Texas Employment Commission (TEC) and the Texas Education Agency collected the occupational employment data. TEC analyzed the data, provided the necessary computer services, and published these findings.

Special thanks are extended to the many cooperating employers who provided the survey data which made this publication possible.

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INTRODUCTION

The Occupational Employment Statistics (OES) Program is a part of a Federal-State Cooperative Program involving State Employment Security Agencies in conjunction with the Employment and Training Administration and the Bureau of Labor Statistics.

The OES Program is designed to: (1) provide accurate profiles of occupational resources by industry and trends in the number of workers by occupation, (2) aid in projections of future manpower requirements by industry and occupation, and (3) identify emerging and disappearing occupations. This information will help in the development of educational training programs and will also provide valuable information for employment counselors and manpower planners. These data will be used to refine and modify the worker-demand projections generated through the Industry-Occupation Matrix System.

Data for Educational Services were collected during the survey week of October 12, 1978.

The purpose of this survey is twofold. First, the survey will enable the Bureau of Labor Statistics (BLS) to have national demand employment statistics projections. Second, the data from the survey will be used by the National Center for Education Statistics (NCES) and the Statistical Analysis Group in Education (SAGE). Because of procedural requirements involved within the public elementary and secondary education sector, it was necessary that BLS and NCES get approval for this survey from the Committee on Evaluation and Information Systems. A primary responsibility of this committee is to monitor Federal data collection activities to guard against duplication and unnecessary reporting burdens.

This survey also represents estimated employment by occupation for the following: public elementary and secondary schools, nonpublic elementary and secondary schools, colleges, universities, professional schools, junior colleges, technical schools, private libraries and information centers, correspondence and vocational schools, and miscellaneous educational services.

Multiple job holders (performing work in two or more listed occupations) were classified only once in the occupation requiring the highest level of skill. Working supervisors (those spending 20% or more of their time at work similar to that performed by workers under their supervision) were classified in the occupations that were most closely related to their work duties.

METHODOLOGY

The Sample and Estimating Procedures

The sampling frame furnished by the National Center for Education Statistics was used as the base for generating estimates for the bulk of Educational Services. Normally total employment (benchmark) figures are available by industry, area, and size from ES-202 records. For Education, however, this benchmark source is generally inadequate in coverage. This does not preclude making estimates. The weighted response method gives a valid estimate, provided the weights are adjusted to reflect the nonrespondents (weights of usable responding units were adjusted in all sampling cells to account for the nonresponse incurred in each cell). For the most part, ES-202 records were used for private libraries and information centers and miscellaneous schools and educational services.

When standard estimating procedures were employed, a ratio method (established statistical procedure) was used. Any given size class of any given Educational segment represents an estimating cell. All establishments in a given cell are assigned a sample weight which is the inverse of the sampling ratio. There is a direct relationship between employment and the number of units within a size class to determine the ratio, or the probability of sample selection.

The employment for any specific occupation in each establishment is inflated by its sample weight and summed for all sample establishments in the cell. A ratio is then derived of the weighted employment for each occupation to the weighted reported total employment. This ratio is then multiplied by the benchmark employment for that estimating cell as of October 12, 1978, the survey month, thus yielding the occupational makeup of the estimating cell for that date.

Like occupational employments are summed across all employment size classes within each three-digit SIC to arrive at a total industry employment for each occupation. Two-digit estimates of occupational employment were derived by summing estimates across three-digit SIC industries.

For total Educational Services, the estimated benchmark (universe) employment was 423,330.

Sampling Error

In Educational Services, the sampling error is an arithmetic measure of the precision of the estimate. It is the error that results from the difference between data obtained if the same survey methods were applied to collecting identical information from the entire population (universe).

The relative errors express the absolute sampling error of an estimate as a percentage of that estimate. Because this measure of precision is on the same base for different estimates, comparison is possible. The relative errors are such that the chances are two out of three (68%) that the results of such a complete survey of all firms would not differ by plus or minus one relative standard error from the OES occupational estimates, and an interval of two relative standard errors will yield a 95% confidence level.

For example, the OES estimate of employment in Educational Services for the number of Accountants and Auditors employed was 510 with a relative standard error of 5.81%. The chances are two out of three that the true number of workers employed in that occupation at the time of the survey was between 480 and 540 ($510 \pm .0581 \times 510$), and we may be 95% certain that the true number fell between 451 and 569 ($510 \pm 2 \times .0581 \times 510$). The relative standard error allows the user to judge, with a given degree of confidence, the quality of any particular occupational estimate. It is a measure of the relative dispersion within the data collected, and indicates the occupational coefficient of variation of the population from which the sample was drawn.

Nonsampling Error

In Educational Services, a survey of this design and complexity is going to have a small degree of nonsampling error. Examples of these errors are faulty questionnaire design, inaccuracy of data furnished, ineffective processing, and nonresponse. The possibility of errors in the design of and the data furnished by the questionnaires, as well as errors in processing, was recognized from the start of the survey. Every effort was exercised to avoid and control them.

The nonresponse area was handled to a large degree by the built-in variables of the sampling and estimating process. This process takes into consideration that the occupational distribution of the nonreporting sample unit in a given employment size class is the same as among the reporting establishments of that size class.

Collection Procedures

The Educational Services segment is the only major employer where employment is not readily available from existing records. In consideration of this limitation, the U.S. Department of Labor asked the assistance of the Texas Employment Commission and the Texas Education Agency in collecting occupational employment. The Texas Education Agency sampled public elementary and secondary schools. The Texas Employment Commission surveyed the balance of the Education sector and also made the estimates for all the Education segments.

Data for Educational Services was collected by mail. Survey operations included an initial mail-out and two follow-ups to nonrespondents. In some cases, an extra follow-up was made where nonresponse was a critical factor. The telephone was used to clarify information, handle critical areas, and prompt respondents to furnish survey data.

CONSIDERATIONS OF THE USES OF THE ESTIMATES

Relative Error

Relative error is a measure of precision and expresses the absolute sampling error of an estimate as a percentage of that estimate. From an accuracy standpoint, the higher the relative error - the less accurate the estimate. If relative errors exceeded fifty percent, the employment from these occupations was merged with the employment of the "all other" residual category that was relevant to them.

Throughout the tables, it should be noted that the relative error is computed only for specific occupations and not for residual categories nor for occupational groupings. These are noted by "na" (not applicable).

Rounding Errors and Occupations With Employment Less Than Thirty

All percentage estimates are carried out to two decimal places with the exception of the percent of establishments reporting the occupation. These percentages were rounded to the nearest whole number.

In this survey many more occupations were surveyed than are actually shown in the tables. Occupations which had employment of less than thirty were suppressed, and their employment was added to the residual category for their major occupational group. All employment estimates were rounded to the nearest five.

STAFFING PATTERNS

TABLE 1

ELEMENTARY AND SECONDARY SCHOOLS, PRIVATE

SIC 821

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT	17,145	100.00	na	na
MANAGERS, OFFICERS, AND ADMINISTRATORS, TOTAL	905	5.29	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL	12,205	71.18	na	na
Librarians, Professional	445	2.58	32.68	54
Teachers, Secondary School	5,635	32.86	38.98	31
All Other Professional Workers	180	1.05	na	na
All Other Teachers	2/			
SERVICE OCCUPATIONS, TOTAL	1,335	7.79	na	na
Janitors, Porters, and Cleaners	825	4.80	28.55	62
All Other Service Workers	2/			
DISTRIBUTION, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	570	3.32	na	na
CLERICAL OCCUPATIONS, TOTAL	2,130	12.42	na	na
Bookkeepers, Hand	420	2.45	31.23	54
General Clerks, Office	475	2.76	28.41	62
Secretaries	540	3.14	33.00	54
All Other Clerical Workers	695	4.05	na	na

1/ Based on unrounded data.
2/ Estimates below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

Occupation	Percent
General Clerk, Office	62
Janitors, Porters, and Cleaners	62
Bookkeepers, Hand	54
Librarians, Professional	54
Secretaries	54

TABLE 2

ELEMENTARY AND SECONDARY SCHOOLS, PUBLIC

SIC 821

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT	275,510	100.00	na	na
MANAGERS, OFFICERS, AND ADMINISTRATORS, TOTAL	11,120	4.04	na	na
Assistant Principals	2,360	.85	4.35	53
Principals	4,210	1.52	1.28	95
Superintendents	1,715	.62	3.25	98
All Other Managers and Officers	2,835	1.02	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL	157,040	57.00	na	na
Caseworkers	335	.12	9.20	14
Curriculum Specialists	1,370	.49	5.91	39
Librarians, Professional	2,915	1.05	2.00	80
Nurses, Professional	2,065	.75	3.01	71
Psychologists	510	.18	11.45	20
Speech Pathologists and/or Audiologists	1,560	.56	7.79	60
Teachers and/or Instructors, Nonvocational Education	1,105	.40	19.82	8
Teachers and/or Instructors, Vocational Education or Training.	2,575	.93	36.27	9
Teachers, Elementary and/or Preschool	68,120	24.72	.34	98
Teachers, Secondary School	69,755	25.31	.33	94
Vocational and Educational Counselors	4,310	1.56	2.43	77
All Other Professional and Technical Workers	595	.22	na	na
All Other Teachers	1,825	.66	na	na

Table 2 (Continued)

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
SERVICE OCCUPATIONS, TOTAL	49,260	17.88	na	na
Cooks, Institution	12,230	4.43	5.63	92
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	4,100	1.48	13.10	13
Guards and Doorkeepers	1,210	.43	22.29	11
Janitors, Porters, and Cleaners	19,200	6.96	1.76	99
Kitchen Helpers	12,350	4.48	.84	50
All Other Service Workers	170	.06	na	na
DISTRIBUTION, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	17,950	6.51	na	na
Bus Drivers, School	10,110	3.66	3.76	87
Gardeners and Groundskeepers	1,270	.46	11.71	18
Maintenance Repairers, General Utility	4,960	1.80	6.14	26
Mechanics, Automotive	1,280	.46	4.35	61
All Other Skilled Craftsmen and Kindred Workers	40	.01	na	na
All Other Operatives and Semiskilled Workers	70	.03	na	na
All Other Laborers and Unskilled Workers	220	.07	na	na
CLERICAL OCCUPATIONS, TOTAL	40,140	14.57	na	na
Bookkeepers, Hand	1,115	.40	6.12	71
Bookkeeping and/or Billing Machine Operators	245	.08	15.56	11
General Clerks, Office	7,680	2.78	4.84	63
Keypunch Operators	180	.06	7.93	11
Secretaries	7,305	2.65	3.60	83
Stock Clerks - Stockroom, Warehouse or Storage Yard	445	.16	13.00	18
Teacher Aides and/or Educational Assistants	22,800	8.27	3.19	96
All Other Office Clerical Workers	2/			
All Other Office Machine Operators	2/			

1/ Based on unrounded data
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

Occupation	Percent
Janitors, Porters, and Cleaners	99
Superintendents	98
Teachers, Elementary and/or Preschool	98
Teacher Aides and/or Educational Assistants	96
Principals	95

TABLE 3

COLLEGES, UNIVERSITIES, PROFESSIONAL SCHOOLS, AND JUNIOR COLLEGES

SIC 822

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT	126,750	100.00	na	na
MANAGERS, OFFICERS, AND ADMINISTRATORS, TOTAL	7,475	5.90	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL	67,360	53.14	na	na
Accountants and Auditors	510	.40	5.81	64
Agricultural Scientists	220	.17	39.98	3
Assistant Professors	7,600	5.99	7.18	62
Associate Professors	5,855	4.61	6.45	63
Athletic Coaches	540	.42	8.35	55
Audio Visual Specialists	75	.05	24.84	9
Biological Scientists	1,330	1.04	25.58	8
Computer Programmers	500	.39	18.70	56
Extension Service Specialists	700	.55	40.08	3
Graduate Assistants	5,605	4.42	15.33	33
Lecturers	3,665	2.89	20.76	28
Librarians, Professional	1,050	.82	5.90	98
Licensed Practical Nurses	305	.24	39.83	20
Medical and Dental Technicians and Technologists	520	.41	42.66	8
Medical Scientists	65	.05	33.85	4
Nurses, Professional	1,055	.83	35.70	51
Personnel and Labor Relations Specialists	285	.22	10.32	40
Professors	5,345	4.21	5.78	65
Purchasing Agents and/or Buyers	95	.07	23.54	11
Science Technicians	3,410	2.69	13.39	20
Systems Analysts, Electronic Data Processing	430	.33	11.65	40
Teachers and/or Instructors, Nonvocational Education	2,185	1.72	22.19	20

Table 3 (Continued)

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
Teachers - College, Junior College, University, Professional School, or Technical Institute	19,910	15.71	3.33	95
Technical Assistants, Library	640	.50	12.05	59
Vocational and Educational Counselors	910	.71	8.61	77
All Other Professional Workers	2,090	1.65	na	na
All Other Teachers	2/			
All Other Technical Workers	2,280	1.80	na	na
SERVICE OCCUPATIONS, TOTAL	12,410	9.80	na	na
Supervisors, Nonworking - Service	675	.53	7.19	66
Cooks, Institution	630	.49	9.48	48
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	235	.18	11.81	29
Dining Room Attendants, Bartender Helpers, or Cafeteria Attendants	750	.59	33.56	20
Guards and Doorkeepers	970	.76	7.02	70
Janitors, Porters, and Cleaners	6,430	5.07	3.39	91
Kitchen Helpers	1,015	.80	19.62	27
Pantry, Sandwich and/or Coffee Makers	150	.11	30.26	13
All Other Food Service Workers	2/			
All Other Service Workers	1,555	1.23	na	na
DISTRIBUTION, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	6,420	5.06	na	na
Supervisors, Nonworking	435	.34	9.86	54
Carpenters	490	.38	9.30	54
Electricians	310	.24	5.67	44
Gardeners and Groundskeepers	1,580	1.24	5.26	80
Helpers, Trades	830	.65	13.98	34
Maintenance Repairers, General Utility	1,220	.96	10.11	77
Painters, Maintenance	430	.33	10.85	48
Press Operators and/or Plate Printers	210	.16	30.01	21

Table 3 (Continued)

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
Stationary Boiler Firers	255	.20	11.47	22
All Other Skilled Craftsmen and Kindred Workers	365	.29	na	na
All Other Operatives and Semiskilled Workers	2/			
All Other Laborers and Unskilled Workers	180	.14	na	na
CLERICAL OCCUPATIONS, TOTAL	32,825	25.90	na	na
Clerical Supervisors, Office or Plant	495	.39	14.47	47
Accounting Clerks	1,325	1.04	4.45	73
Admissions Evaluators	285	.22	9.20	60
Bookkeepers, Hand	130	.10	11.33	38
Cashiers	480	.37	10.32	72
Computer Operators	360	.28	4.80	56
File Clerks	1,545	1.21	35.23	20
General Clerks, Office	5,730	4.51	9.09	66
Keypunch Operators	565	.44	14.97	50
Library Assistants	820	.64	10.81	76
Mail Clerks	310	.24	6.58	62
Payroll and/or Timekeeping Clerks.	120	.09	10.45	53
Personnel Clerks	110	.08	13.25	34
Receptionists	420	.32	42.69	27
Secretaries	8,840	6.97	5.03	97
Statistical Clerks	125	.10	17.46	18
Stenographers	210	.16	18.57	12
Stock Clerks - Stockroom, Warehouse or Storage Yard	695	.54	10.94	53
Switchboard Operator-Receptionists	80	.06	12.17	30
Switchboard Operators	250	.19	7.84	59
Teacher Aides and/or Educational Assistants	2,015	1.59	38.66	10
Typists	3,055	2.41	8.30	59
All Other Clerical Workers	2/			
All Other Office Machine Operators	2/			
SALES OCCUPATIONS, TOTAL	260	.20	na	na
Sales Clerks	250	.19	19.26	35
All Other Sales Workers	2/			

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

Occupation	Percent
Librarians, Professional	98
Secretaries	97
Teachers - College, Junior College, University, Professional Schools, or Technical Institutes	95
Janitors, Porters, and Cleaners	91
Gardeners and Groundskeepers	80

TABLE 4

LIBRARIES AND INFORMATION CENTERS
CORRESPONDENCE SCHOOLS AND VOCATIONAL SCHOOLS
SCHOOLS AND EDUCATIONAL SERVICES, NOT ELSEWHERE CLASSIFIED

SIC 823, 824, & 829

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT	3,925	100.00	na	na
MANAGERS, OFFICERS, AND ADMINISTRATORS, TOTAL	605	15.40	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL	2,315	58.97	na	na
Curriculum Specialists	40	.99	33.44	15
Librarians, Professional	65	1.68	40.52	12
Teachers and/or Instructors, Nonvocational Education	690	17.58	23.30	24
Teachers and/or Instructors, Vocational Education or Training	1,135	28.89	11.76	58
All Other Professional & Technical Workers	105	2.68	na	na
All Other Teachers	280	7.14	na	na
SERVICE OCCUPATIONS, TOTAL	145	3.72	na	na
Janitors, Porters, and Cleaners	90	2.31	25.74	31
All Other Service Workers	55	1.40	na	na
DISTRIBUTION, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	80	2.06	na	na
CLERICAL OCCUPATIONS, TOTAL	660	16.79	na	na
Accounting Clerks	35	.86	33.91	15
Bookkeepers, Hand	75	1.88	26.95	33
File Clerks	40	.99	42.77	13
General Clerks, Office	140	3.54	29.26	31
Library Assistants	50	1.27	46.04	4
Secretaries	170	4.35	17.22	51
All Other Clerical Workers	2/			

Table 4 (Continued)

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
SALES OCCUPATIONS, TOTAL	120	3.06	na	na
Sales Representatives, Agents, and/or Associates	115	2.95	24.44	30
All Other Sales Workers	2/			

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

Occupation	Percent
Teachers and/or Instructors, Vocational Education or Training	58
Secretaries	51
Bookkeepers, Hand	33
General Clerks, Office	31
Janitors, Porters, and Cleaners	31

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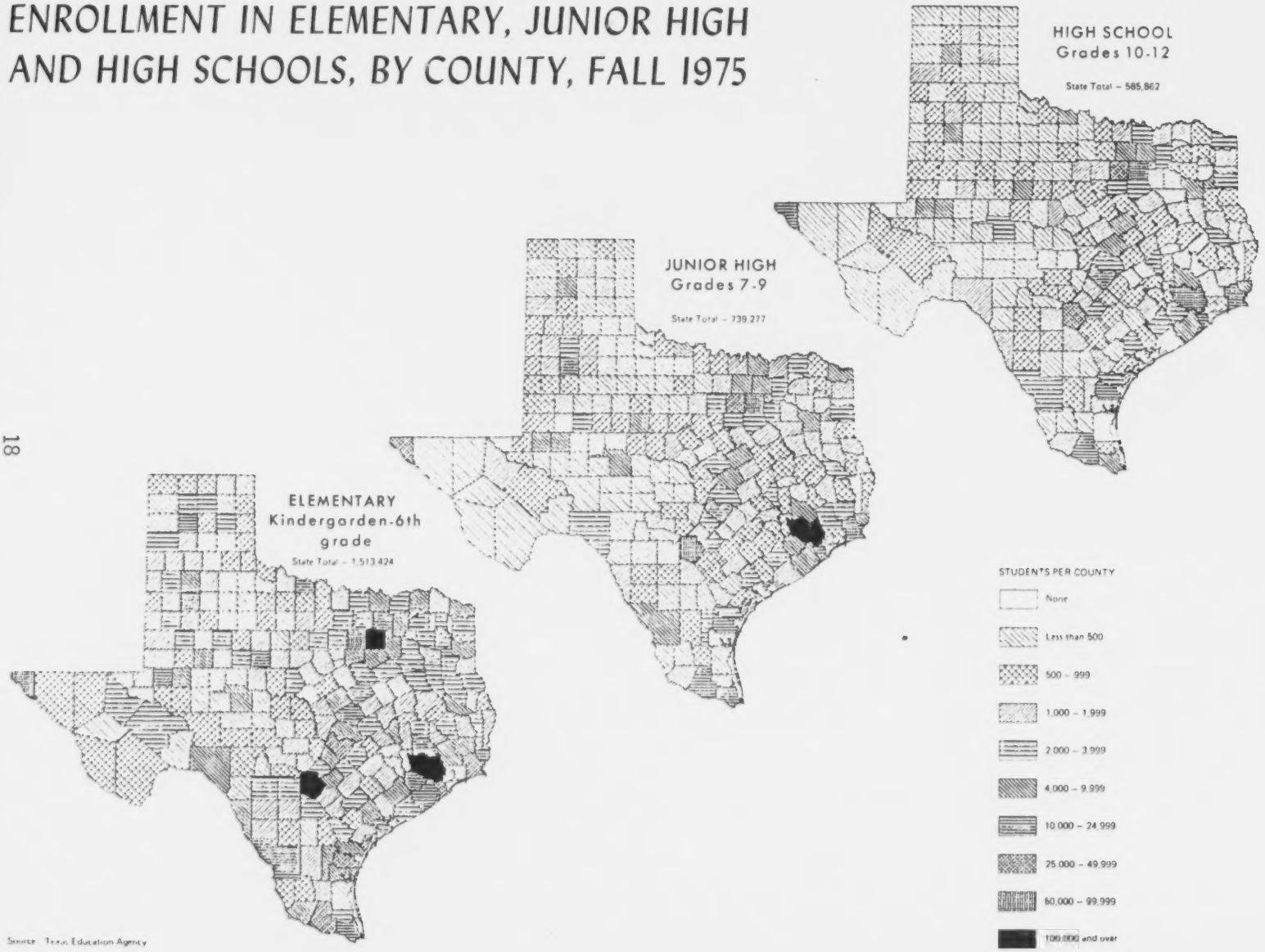
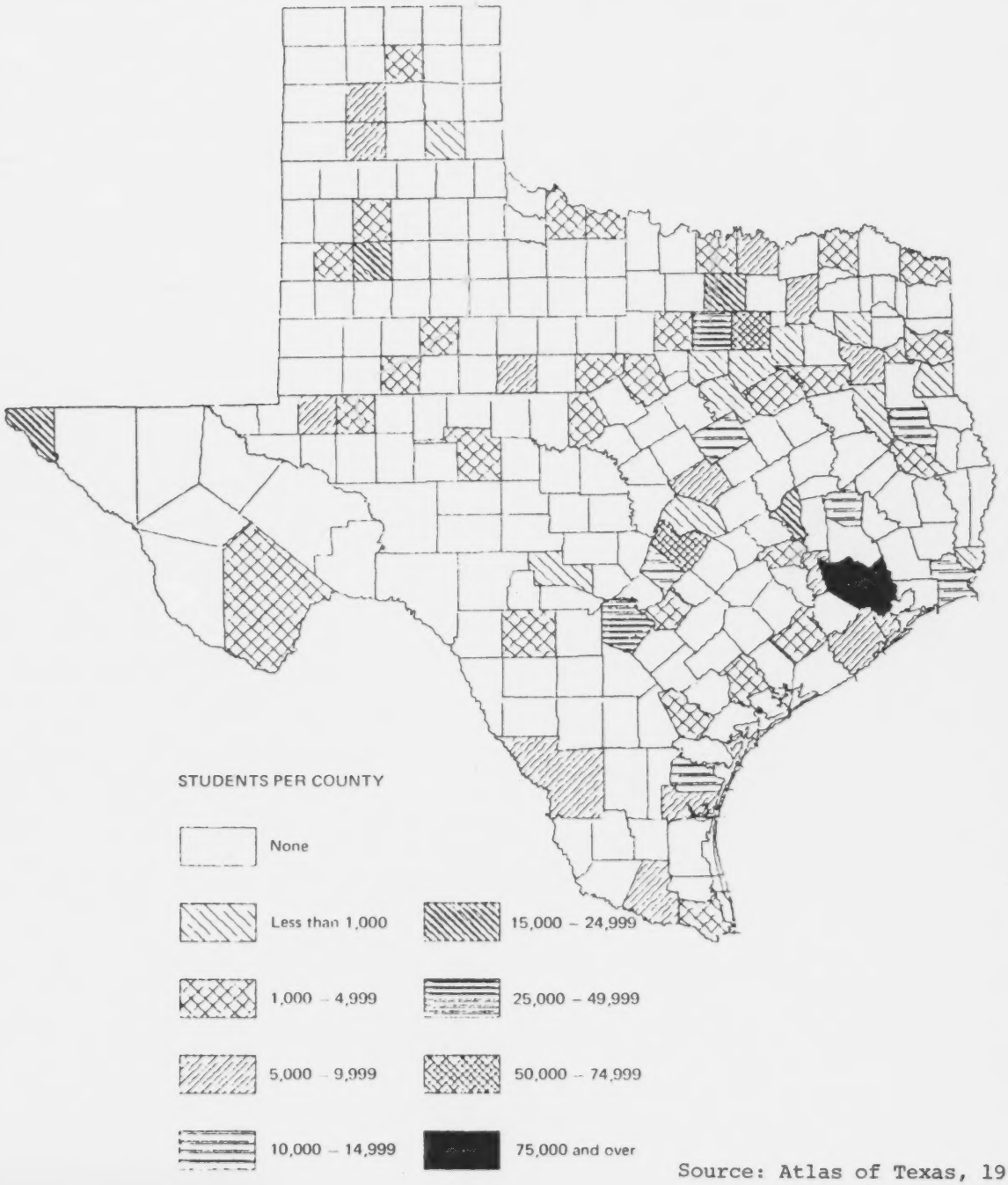
ENROLLMENT IN ELEMENTARY, JUNIOR HIGH AND HIGH SCHOOLS, BY COUNTY, FALL 1975



Source: Texas Education Agency

ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION BY COUNTY, FALL 1975



Source: Atlas of Texas, 1976

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GLOSSARY OF TERMS

Benchmark Employment: A term which is used to identify specific employment figure(s) which existed at a particular point in time. In the OES survey program, the term benchmark is used in two ways: (1) It is the establishment or industry employment that existed at the time the sample was designed. (2) When estimates are made, it is used again to refer to the total universe employment for each estimating cell as of the reference date of the survey.

ES-202: A quarterly listing of employment and contributions of all firms covered under the unemployment insurance laws of Texas.

Establishment: An economic unit which produces goods or services, for example: a consulting service, a factory, or a store. In most instances, each establishment is a single physical location and is engaged in one predominate type of economic activity for which an industry code is applicable. Establishments are also referred to as reporting units.

Estimating Cell: One size class in one industry.

Sample Weight: A numerical value that is assigned to an establishment during the sample selection. For example, if an establishment has an occupational employment of 25 and a weight of three, then for estimating purposes, the 25 employment will have a representation of 75 (3x25).

Sampling Error: The difference between data obtained from a sample and data which would have been obtained if the same survey methods were applied to collecting identical information from the entire population.

Sampling Frame: The sampling units actually available to sample.

Sampling Units: The establishments selected randomly from the universe.

Size Class: The stratification of an industry by employment. For example, establishments with employment of 10-19 would be in one size class, and those with employment of 20-49 would be in another size class, etc.

Standard Industrial Classification (SIC): A grouping of establishments primarily engaged in the same or similar lines of economic activity. In Educational Services, the line of activity is generally defined as any function that excludes Manufacturing, Nonmanufacturing, Wholesale and Retail Trade, Regulated Industries, and Government. Throughout this report, SIC's are correlated with a significant numerical designation. For example, SIC 822 is colleges, universities, professional schools, and junior colleges.

Universe: Total amount of establishments or units covered under the Texas Employment Security Law.

Usable Response: All receipts which, after initial classification and schedule review, are judged to contain usable OES data.

BIBLIOGRAPHY

Dallas Morning News, Texas Almanac, Dallas: A. H. Belo Corporation, 1980-1981.

Executive Office of the President/Office of Management and Budget, Standard Industrial Classification Manual, 1972, Washington, D. C.: U. S. Government Printing Office.

United States Department of Labor, U. S. Employment Service, Dictionary of Occupational Titles, Fourth Edition, 1977.

United States Department of Labor, Bureau of Labor Statistics, Operations Manual for Occupational Employment Survey, Second Edition, 1975.

University of Texas at Austin, Bureau of Business Research, Atlas of Texas, 1976.